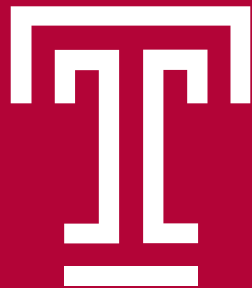
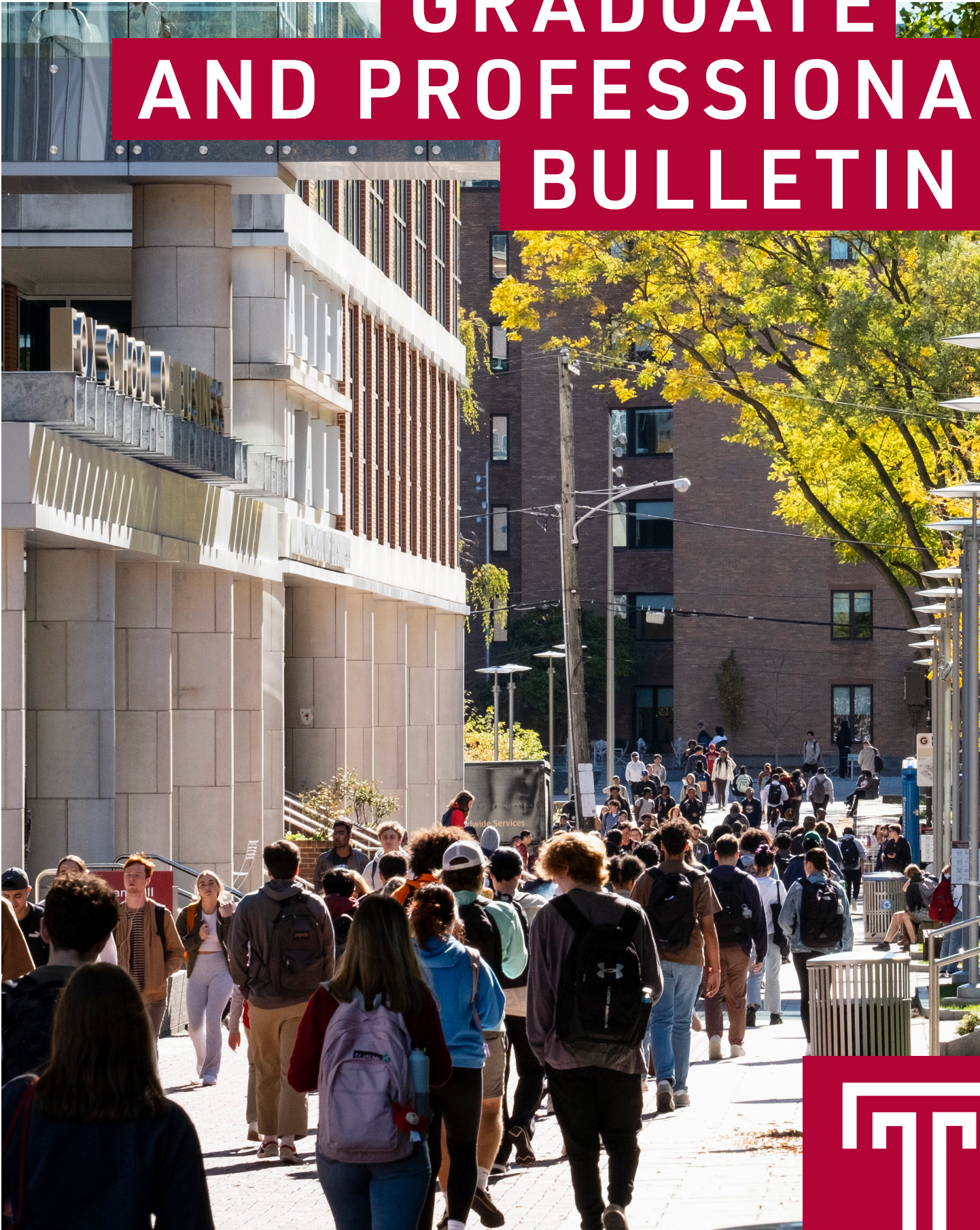


2023-2024

# GRADUATE AND PROFESSIONAL BULLETIN



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Nutrition (NUTR) .....	1688	Science, Secondary Education (SCSE) .....	1872
Obstetrics, Gynecology & Reproduction (OBGY) .....	1690	Secondary Education (SECE) .....	1873

Social and Behavioral Sciences (SBS) .....	1873
Social Studies Education (Elementary) (SSEE) .....	1877
Social Studies Education (Secondary) (SSES) .....	1877
Social Work (Graduate) (SSWG) .....	1878
Sociology (SOC) .....	1889
Spanish (SPAN) .....	1895
Special Education (SPED) .....	1901
Sport and Recreation Management (SRM) .....	1907
Sport, Tourism and Hospitality Management (STHM) .....	1912
Statistics (STAT) .....	1915
Strategic Communication (STRC) .....	1924
Strategic Management (SGM) .....	1925
Supervisory Certification Program (SUPV) .....	1931
Supply Chain Management (SCM) .....	1931
Surgery (SURG) .....	1933
Teaching English to Speakers of Other Languages (TESL) .....	1937
Theater (THTR) .....	1940
Therapeutic Recreation (THRC) .....	1958
Tourism and Hospitality Management (THM) .....	1962
Tyler School of Art (TYLE) .....	1970
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# Temple Bulletins

## 2023-2024

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The Bulletin provides enrolled students with the information they need regarding their chosen academic path and helps prospective students make important enrollment decisions.

The information in this bulletin is subject to change by Temple University at any time. Neither this bulletin nor any parts of it may be relied upon as a contract between Temple University and any student, applicant, or other user of this site. All prospective and current students should consult with appropriate University Offices to verify current information and the status of policies, programs, descriptions of curricula, or other information in this bulletin.

Disclaimer: Temple University expressly reserves the right to deliver some or all instruction remotely at its discretion. Tuition, the university services fee and certain other fees are required to be paid in full and will not be refunded regardless of the method of instruction, the inability to access university-maintained facilities, or any disruption to or cancellation of classes, activities, events, services or programs.

### Undergraduate Bulletin

The current Undergraduate Bulletin is for students who began school in Fall 2023.

For students who began prior to Fall 2023, see the Archives.

- [2023-2024 Undergraduate Bulletin](#)
- [Archived Undergraduate Bulletins](#)

### Graduate & Professional Bulletin

The current Graduate and Professional Bulletin is for students who began school in Fall 2023.

For students who began prior to Fall 2023, see the Archives.

- [2023-2024 Graduate & Professional Bulletin \(p. 11\)](#)
- [Archived Graduate & Professional Bulletins](#)

### Other Resources

[Admissions](#)

[Courses](#)

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[Class Schedule](#)

# Graduate and Professional

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Welcome to the Graduate and Professional Bulletin of Temple University.

## Graduate

The Graduate School oversees all facets of graduate education at Temple University. It is responsible for admitting students who meet university requirements and recommending to The Board of Trustees the awarding of master's, professional science master's, and research and practice doctoral degrees. The Graduate School also reviews the qualifications of faculty members who have been appointed as "Graduate Faculty."

Importantly, the Graduate School oversees the quality of new and continuing graduate programs, monitors standards of scholarship, maintains student records, and verifies advancement to candidacy. In concert with the Graduate Board, the Graduate School establishes and maintains admissions and degree requirements in consultation with the deans of the schools and colleges and their graduate councils. The Graduate School also administers policies established by the Graduate Board and Temple University.

## Professional

With the advent of the 2020-2021 academic year, professional education was added to the bulletin. Professional schools at Temple University include:

- Kornberg School of Dentistry
- Beasley School of Law
- Lewis Katz School of Medicine
- School of Pharmacy
- School of Podiatric Medicine

# About the Graduate and Professional Bulletin

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The Graduate and Professional Bulletin is a presentation of specific information about the graduate academic programs and certificates offered under the umbrella of Temple University's Graduate School. It also includes descriptions of the professional programs and certificates offered by the professional schools of Temple University. This version of the Graduate and Professional Bulletin has a release date of July 1, 2023 for the 2023-2024 academic year.

Every effort is made to provide complete and accurate information in the Graduate and Professional Bulletin. The program and certificate descriptions are, however, announcements only and do not serve as a contract. As new programs and certificates go into effect and/or are modified, the Graduate and Professional Bulletin is updated.

# Academic Calendar

This academic calendar is based on the Academic Calendar published by the Office of the University Registrar at <https://registrar.temple.edu/2023-2024-academic-calendar>, but includes dates of vital importance to graduate students (indicated with a leading asterisk) found only herein:

## July 2023

Last day to add/drop for Second Summer 2023 6-week full term	Monday, 7/3
Independence Day (No Classes)	Tuesday, 7/4
Last day to withdraw from First Summer 2023 4-week session 4B course(s)	Wednesday, 7/5
Last day of classes for First Summer 2023 4-week session 4B	Tuesday, 7/11
First day of classes for Second Summer 2023 4-week session	Wednesday, 7/12
Last day to add/drop for Second Summer 2023 4-week session	Friday, 7/14
*Last day for August 2023 graduates to submit final dissertation/thesis to the Graduate School	Monday, 7/24 by 5:00 PM

## August 2023

Last day to withdraw from Summer 2023 12-week term course(s)	Tuesday, 8/1
Last day to withdraw from Second Summer 2023 6-week full-term course(s)	Tuesday, 8/1
Last day to withdraw from Second Summer 2023 4-week session course(s)	Tuesday, 8/1
Last day of classes for Summer 2023 12-week term	Tuesday, 8/8
Last day of classes for Second Summer 2023 6-week full term	Tuesday, 8/8
Last day of classes for Second Summer 2023 4-week session	Tuesday, 8/8
Diploma date for Summer 2023 12-week, First Summer 2023 4-week 4B, and Second Summer 2023 courses	Wednesday, 8/9
First day of classes for Fall 2023 16-week full term	Monday, 8/28
First day of classes for Fall 2023 7-week session 7A	Monday, 8/28

## September 2023

Labor Day (No Classes)	Monday, 9/4
Last day to add/drop for Fall 2023 7-week session 7A	Tuesday, 9/5

Last day to add/drop for Fall 2023 16-week full term Monday, 9/11

## October 2023

Last day to apply for December 2023 graduation for name to appear in the Commencement Book	Sunday, 10/1
Last day to withdraw from Fall 2023 7-week session 7A course(s)	Monday, 10/9
Fall Wellness Day (No Classes)	Friday, 10/13
Nominations for Doctoral Dissertation and Master of Fine Arts Project Completion Grants for spring 2024 and summer 2024 due in the Graduate School	Friday, 10/13 by 12:00 NOON
Last day of classes for Fall 2023 7-week session 7A	Monday, 10/16
First day of classes for Fall 2023 7-week session 7B	Tuesday, 10/17
Last day to add/drop for Fall 2023 7-week session 7B	Monday, 10/23

## November 2023

Fall Break (No Classes)	Monday, 11/20 - Wednesday, 11/22
Thanksgiving Holiday (No Classes)	Thursday, 11/23 - Sunday, 11/26
*Last day for December 2023 graduates to submit final dissertation/thesis to the Graduate School	Wednesday, 11/29 by 5:00 PM

## December 2023

Last day to withdraw from Fall 2023 7-week session 7B course(s)	Monday, 12/4
Last day to withdraw from Fall 2023 16-week full-term course(s)	Monday, 12/11
Last day of classes for Fall 2023 16-week full term	Monday, 12/11
Last day of classes for Fall 2023 7-week session 7B	Monday, 12/11
Diploma date for the Fall 2023 term	Wednesday, 12/20

## January 2024

Dr. Martin Luther King, Jr. Day (No Classes)	Monday, 1/15
First day of classes for Spring 2024 16-week full term	Tuesday, 1/16
First day of classes for Spring 2024 7-week session 7A	Tuesday, 1/16
Last day to add/drop for Spring 2024 7-week session 7A	Monday, 1/22
*Nominations for Round 1 of Presidential and University Fellowships due in the Graduate School	Thursday, 1/25 by 12:00 NOON

Last day to add/drop for Spring 2024 16-week full term	Monday, 1/29
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## February 2024

Last day to apply for May 2024 graduation for name to appear in the Commencement Book	Thursday, 2/1
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*Nominations for Round 2 of Presidential and University Fellowships due in the Graduate School	Monday, 2/12 by 12:00 NOON
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## March 2024

Last day to withdraw from Spring 2024 7-week session 7A course(s)	Monday, 3/4
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Spring Break (No Classes)	Monday, 3/4 - Sunday, 3/10
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Last day of classes for Spring 2024 7-week session 7A	Monday, 3/11
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First day of classes for Spring 2024 7-week session 7B	Tuesday, 3/12
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Nominations for Doctoral Dissertation and Master of Fine Arts Project Completion Grants for Fall 2024 due in the Graduate School	Friday, 3/15 by 12:00 NOON
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*Applications for First Summers Research Initiative Awards for Summer 2024 due in the Graduate School, if funding is available	Friday, 3/15 by 12:00 NOON
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Last day to add/drop for Spring 2024 7-week session 7B	Monday, 3/18
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## April 2024

*Last day for May 2024 graduates to submit final dissertation/thesis to the Graduate School	Wednesday, 4/17 by 5:00 PM
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Last day to withdraw from Spring 2024 7-week session 7B course(s)	Monday, 4/22
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Last day to withdraw from Spring 2024 16-week full-term course(s)	Monday, 4/29
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Last day of classes for Spring 2024 16-week full term	Monday, 4/29
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Last day of classes for Spring 2024 7-week session 7B	Monday, 4/29
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## May 2024

Diploma date for the Spring 2024 term	Wednesday, 5/8
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University Commencement	Thursday, 5/9
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First day of classes for Summer 2024 12-week term	Monday, 5/13
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First day of classes for First Summer 2024 6-week full term	Monday, 5/13
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First day of classes for First Summer 2024 4-week session 4A	Monday, 5/13
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Last day to add/drop for First Summer 2024 4-week session 4A	Thursday, 5/16
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Last day to add/drop for First Summer 2024 6-week full term	Friday, 5/17
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Last day to add/drop for Summer 2024 12-week term	Wednesday, 5/22
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Memorial Day (No Classes)	Monday, 5/27
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## June 2024

Last day to apply for August 2024 graduation for name to appear in the Commencement Book	Saturday, 6/1
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Last day to withdraw from First Summer 2024 4-week session 4A course(s)	Monday, 6/3
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Last day of classes for First Summer 2024 4-week session 4A	Monday, 6/10
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First day of classes for First Summer 2024 4-week session 4B	Thursday, 6/13
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Last day to add/drop for First Summer 2024 4-week session 4B	Friday, 6/14
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Last day to withdraw from First Summer 2024 6-week full-term course(s)	Monday, 6/17
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Juneteenth (No Classes)	Wednesday, 6/19
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Last day of classes for First Summer 2024 6-week full term	Monday, 6/24
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Diploma date for First Summer 2024 full-term courses	Tuesday, 6/25
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First day of classes for Second Summer 2024 6-week full term	Thursday, 6/27
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## July 2024

Last day to add/drop for Second Summer 2024 6-week full term	Monday, 7/1
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Independence Day (No Classes)	Thursday, 7/4
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Last day to withdraw from First Summer 2024 4-week session 4B course(s)	Friday, 7/5
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Last day of classes for First Summer 2024 4-week session 4B	Thursday, 7/11
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First day of classes for Second Summer 2024 4-week session	Friday, 7/12
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Last day to add/drop for Second Summer 2024 4-week session	Monday, 7/15
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*Last day for August 2024 graduates to submit final dissertation/thesis to the Graduate School	Wednesday, 7/24 by 5:00 PM
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## August 2024

Last day to withdraw from Summer 2024 12-week term course(s)	Thursday, 8/1
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Last day to withdraw from Second Summer 2024 6-week full-term course(s)	Thursday, 8/1
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Last day to withdraw from Second Summer 2024 4-week session course(s) Thursday, 8/1

Last day of classes for Summer 2024 12-week term Thursday, 8/8

Last day of classes for Second Summer 2024 6-week full term Thursday, 8/8

Last day of classes for Second Summer 2024 4-week session Thursday, 8/8

Diploma date for Summer 2024 12-week, First Summer 2024 4-week 4B, and Second Summer 2024 courses Friday, 8/9

First day of classes for the Fall 2024 TBD term



# Graduate School Policies

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While the information presented in the policies detailed herein governing graduate education at Temple University is complete and accurate to the best of our abilities, these policies in no way serve as a contract. Some programs impose more stringent requirements than those set by the Graduate Board and the Graduate School. Applicants and enrolled students should contact their dean's office to review school/college policies and consult their graduate advisors to review current program requirements.

Note, however, that all students enrolled at Temple University are subject to Policy 03.70.12: Student Conduct Code.

The policies posted herewith are continuously undergoing revision:

## 02.23 Admission Requirements

## 02.24 Graduate Credits and Standards of Scholarship

## 02.25 Currency and Time Limits

## 02.26 Master's Examination and Thesis

## 02.27 Doctoral Examinations/Culminating Experiences

## 02.28 Doctoral Dissertation

## 02.29 Academic Appeals to the Graduate Board

## 02.30 Exit Requirements

<b>02.23</b>	<b>ADMISSION REQUIREMENTS</b>
	To be considered for admission, an applicant must meet the Temple University minimum standards for scholarship and all criteria established by the school/college and degree program. Admission to graduate programs is competitive; admissions authority rests with the Graduate School and the dean of the school/college. An application is reviewed only when the application fee is paid in U.S. dollars and all official transcripts, standardized test scores, and other application materials required for the degree program are received on or before the deadline.
<b>02.23.11</b>	<b>Minimum Requirements for Admission</b>
02.23.11.01	A baccalaureate degree or its equivalent, as recognized by Temple University, from an accredited post-secondary institution is required.
02.23.11.02.02	Admission of students is initially subject to standards set by the Graduate School and to any higher standards set by individual programs. The minimum admissions standard for all graduate students is ordinarily an undergraduate grade point average of "B" or 3.0 on a 4.0 scale, or the functional equivalent for students who have attended universities outside of the United States.
02.23.11.03	The Graduate School considers exceptions to the admissions requirement if the student meets one of these criteria: <ul style="list-style-type: none"> <li>• Achievement of a 3.25 cumulative grade point average in a least 9 credits of graduate work at an accredited university in the United States or equivalent academic performance in a university outside the United States.</li> <li>• Scores above the 65th percentile on the verbal and quantitative portions of the Graduate Record Examination (or other standardized test, such as the Graduate Management Admission Test).</li> <li>• Attainment of a 3.5 grade point average during their final two years of undergraduate work.</li> </ul>
<b>02.23.12</b>	<b>Examination Requirements for Admission</b>
	A school/college and program may require an examination such as the Graduate Record Examination (GRE®) or the Graduate Management Admission Test (GMAT®). Such examinations must have been taken within the past five years or appear on the official Temple University record of a student who has been previously enrolled.
<b>02.23.13</b>	<b>International Students</b>
	If an applicant attended any institution that does not routinely issue complete academic records in English, they must submit official copies of native language records and literal translations prepared by an appropriate university or government official. Alternately, the applicant may submit the academic documents to a credential evaluation organization approved by Temple University and request that the evaluation be sent directly to the intended program at Temple University. At the same time, an unofficial copy of the academic records on which the outside evaluation is based should be sent to the intended program at Temple University.

02.23.13.01	An applicant who does not hold a baccalaureate degree from an institution in which the sole language of instruction is English is required to present official scores from one of the following tests of English to meet these minimum English language requirements:
	<ul style="list-style-type: none"> <li>• Test of English as a Foreign Language (TOEFL iBT®). The minimum score required is 79 for all programs, with the exception of the Master of Music (MM) in performance, which accepts a TOEFL score of 71.</li> </ul>
	<ul style="list-style-type: none"> <li>• International English Language Testing System (IELTS™). The minimum score required on the academic version of the test is 6.5.</li> </ul>
	<ul style="list-style-type: none"> <li>• PTE Academic™. The minimum score required is 53.</li> </ul>
	<ul style="list-style-type: none"> <li>• Duolingo. The minimum score required is 110.</li> </ul>
<b>02.23.14</b>	<b>School and College Admissions Criteria</b>
	The faculties of each program establish additional admissions requirements that are approved by the graduate council or other governance body of the school/college. Additional requirements beyond the Temple University minimum requirements typically include the following:
	<ul style="list-style-type: none"> <li>• standardized tests</li> </ul>
	<ul style="list-style-type: none"> <li>• grades and/or completion of specific coursework</li> </ul>
	<ul style="list-style-type: none"> <li>• evidence of writing ability</li> </ul>
	<ul style="list-style-type: none"> <li>• professional experience</li> </ul>
	<ul style="list-style-type: none"> <li>• statement of goals and expressed specific interests in research or other creative activities</li> </ul>
	<ul style="list-style-type: none"> <li>• portfolios</li> </ul>
	<ul style="list-style-type: none"> <li>• auditions</li> </ul>
	<ul style="list-style-type: none"> <li>• letters of recommendation</li> </ul>
	Because admissions requirements for graduate programs vary widely, an applicant must contact the school/college and program for current information. It is the responsibility of the applicant to submit all required credentials and other evidence of qualifications by the deadline set by the school/college and program.
<b>02.23.15</b>	<b>Applications</b>
02.23.15.01	Application deadlines vary by program as shown in the Graduate Bulletin. To be considered for any form of graduate student financial support, an applicant should apply in advance of posted deadlines. To be considered for Temple University fellowships, an applicant must apply by December 15 for admission the following Fall term. Only a student who has been admitted may be considered for Assistantships, Fellowships, Scholarships, and Student Financial Aid (loans or work-study).
02.23.15.02	Prospective students may apply to more than one degree program, but must submit a complete application to each. A student accepted into a graduate program may matriculate in only one program, except in the case of officially designated dual degree programs.
02.23.15.03	Applicants to dual degree programs must be admitted to both degree programs and complete all requirements for both degrees. Admission to one program does not guarantee admission to the other.
02.23.15.04	All students must apply for graduation and pay the associated fees by the deadline listed in the Temple University Academic Calendar and/or in the version of the Graduate School Calendar adapted for graduate students. This is the only means by which a diploma is produced and an awarded degree transcribed. The graduation application is accessed through TUportal by selecting <b>Self Service Banner (SSB)</b> , then <b>Student » &gt;Student Records » &gt; Apply to Graduate</b> .
<b>02.23.16</b>	<b>Change of Degree Program</b>
02.23.16.01	A matriculated student in a doctoral program may, with the approval of the advisor and the dean of the school/college, request a transfer to a master's degree program in the same department and field without reapplying. The department or program must review the student's record and make the final decision about accepting the student into the master's degree program.
02.23.16.02	A matriculated student in a master's program must apply for admission to the doctoral program, even in the same department and field. (This is not applicable if the student was admitted into the PhD program at the time of admission into the master's program.) The procedures for applying are governed by the dean of the school/college and graduate council or other governance body.

**02.24 GRADUATE CREDITS AND STANDARDS OF SCHOLARSHIP**

To review the official Temple University policy regarding credits, see Policy 02.10.19: Credit Hours Policy at <https://secretary.temple.edu/sites/secretary/files/policies/02.10.19.pdf>.

**02.24.10 Registration**

Students must be appropriately registered for courses. Those who are not on the published grade list for a course may not receive a grade or credit for that course. Students are advised to utilize Self-Service Banner (SSB), accessible through the TUportal, to confirm billing and registration status, particularly when adding a course, dropping a class, or otherwise revising their roster. All students are responsible for ensuring that their registration is accurate. Note that any student who is registered for a course but does not attend will be billed for the course and will receive a final grade of "F" from the instructor.

**02.24.11 Grades**

02.24.11.01 Courses graded A, A-, B+, B, B-, C+, C, C-, D+, D, D-, and F are used to calculate the graduate grade point average (GPA). No grade below a "C-" can be used to fulfill any graduate requirement.

An "R" (Registered) grade indicates registration for the preliminary/comprehensive exam or a thesis, dissertation, or final project that is still in progress—and its use is restricted to this purpose. Therefore, the only courses that can receive an "R" grade are:

9993 - Master's Comprehensive Examination

9994 - Doctoral Preliminary/Candidacy Examination

9995 - Thesis/Project or Master of Fine Arts Credits

9996 - Master's Thesis Credits

9998 - Dissertation Proposal/Candidacy

9999 - Dissertation Credits

Courses numbered 9993 through 9999 cannot be graded "I" (Incomplete). These ongoing examinations and research projects require registration every term until their completion. Only the number of required s.h. for the completion of each of the aforementioned courses in the published program of study for each graduate degree offered by a department and found on the Graduate Bulletin webpage can and must be changed from an "R" grade to an assigned final grade of A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, or P. All other "R" grades in excess of the required published s.h. for a program of study found on the Graduate Bulletin webpage remain on the transcript for all terms as "R." The GPA does not include courses designated "R." In addition, "R"-graded courses in excess of the amount required for degree completion are not included in the number of hours completed nor the number of hours passed.

The "R" grade is not—and cannot be used as—a substitute for an "I" grade. The "I" grade is appropriate for a one-term didactic course that will be completed within a year or assigned the contracted default grade.

"P" indicates Pass. Individual schools may authorize the use of Pass/Fail only for practica, seminars, and other courses for which traditional grading is inappropriate and only when all students are graded on a P/F basis. No grade points are assigned to either the "P" or "F" grade. In a course with the P/F grading option, "P" is equivalent to A, A-, B+, B, B-, C+, C, or C-, and "F" is equivalent to D+, D, D-, or F.

No grade points are assigned to either the "CR" (Credit) or "NC" (No Credit) grade. "CR" is equivalent to A, A-, B+, B, B-, C+, C, or C-, while "NC" is equivalent to D+, D, D-, or F.

Effective Spring 2020, any graduate student taking an undergraduate course for graduate credit will be subject to the following grade modes for the undergraduate course:

- No grade points are assigned to either the "CR" (Credit), "CD" (Credit D) or "NC" (No Credit) grade.
- "CR" is equivalent to A, A-, B+, B, B-, C+, C, or C-; "CD" is equivalent to D+, D, or D-; and "NC" is equivalent to F.

02.24.11.02 A student who receives more than two grades below "B-" or more than one grade of "F" is dismissed for failure to maintain satisfactory grades.

02.24.11.03 A minimum cumulative GPA of 3.0 is required in order to complete a master's or doctoral degree program and graduate.

02.24.11.03.01 To earn a graduate or post-master's certificate, the graduate student must meet the standards of scholarship established for the certificate program. Any passing grade of "C-" or higher can be counted toward completion of the certificate, if permitted by the department and school/college.

02.24.11.04 A doctoral student must take at least 2 s.h. of Dissertation Research (9999) after having been advanced to candidacy. Because these courses reflect continuing work on a single project, the student receives a grade (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F or Pass/Fail, depending on the departmental grading system) for only the final term after having fulfilled this requirement, which entails filing the final approved dissertation with the Graduate School.

02.24.11.05 To remain in Academic Good Standing at Temple University, a non-matriculated or matriculated graduate student must achieve a term GPA of at least 3.0 for each term and maintain a cumulative GPA of at least 3.0 for all work completed at Temple University. The policy on Academic Good Standing operates in conjunction with Graduate School Policy 02.24.11.02 concerning substandard grades.

<b>02.24.12</b>	<b>Incompletes</b>
	An instructor may assign an Incomplete ("I") to a student who does not complete all coursework. The "I" may be changed to a letter grade if the student completes the coursework within one calendar year.
02.24.12.01	The student must file a contract with the faculty member of record stating what outstanding work remains to be completed. The faculty member must sign the contract and retain it in the student's permanent departmental file. All work must be completed, graded, and the change of grade filed with the Office of the University Registrar within one calendar year of the assignment of the Incomplete.
02.24.12.02.01	Change to Incomplete Policy Effective Fall 2003, the President instituted a policy change regarding Incompletes (see Policy 02.10.13: Incomplete Coursework Policy at <a href="https://secretary.temple.edu/sites/secretary/files/policies/02.10.13.pdf">https://secretary.temple.edu/sites/secretary/files/policies/02.10.13.pdf</a> ) for graduate and undergraduate students. As part of the Incomplete contract, the faculty member must assign a default grade that will apply if work is not completed per the contract or within one year of the assignment of the Incomplete grade.
02.24.12.03	A student who receives a Permanent Incomplete and wishes to receive credit for that course is required to re-register, pay tuition, and retake that course to receive a grade.
<b>02.24.13</b>	<b>Credits for Coursework in a Degree Program</b>
02.24.13.01	No course may be used to satisfy a credit hour requirement for more than one degree, except where course requirements for one degree (master's degree) are required for a more advanced degree (e.g., Ph.D.) or have been designated as eligible to satisfy the requirements of an officially designated dual degree program.
02.24.13.02	Courses in which a grade of "B" or higher has been earned while completing a graduate certificate prior to matriculation may be applied toward completion of a master's degree.
<b>02.24.14</b>	<b>Repeating a Course for Additional Credit</b>
	A student may repeat an Independent Study or other course for additional credit if the course content varies each term as designated in the Graduate Bulletin.
<b>02.24.15</b>	<b>Repeating a Course for Credit</b>
	A student may, with the permission of the advisor and graduate program director, retake a course once in order to improve the grade. The higher grade is used to calculate the graduate GPA. The s.h. for the course are counted only once toward graduation requirements.
<b>02.24.16</b>	<b>Graduate Credit for Undergraduate Courses</b>
	A graduate student may take an undergraduate upper division course for graduate credit only with the advanced written permission of the student's advisor and the dean of the school/college, prior to the first day of classes. Permission is granted only if the graduate student is required to complete more advanced work than that required of undergraduates, and the "Request to Take an Undergraduate Course for Graduate Credit" form, found in TUportal under the Tools tab within "University Forms," specifies the nature and extent of the additional work (e.g., a research paper or project). To receive graduate credit, the student must pay graduate tuition and fees.
<b>02.24.17</b>	<b>Enrollment in Undergraduate Courses Not for Graduate Credit</b>
	A student admitted to a graduate program may enroll in an undergraduate course to elevate their level of preparation to the standard expected of an entering graduate student, but such courses cannot be used to satisfy a graduate degree requirement.
<b>02.24.18</b>	<b>Prerequisites</b>
02.24.18.01	A prerequisite is preparatory work that must be completed prior to undertaking specified coursework in the degree program. Credits earned completing prerequisites do not count toward the total number of s.h. required for the degree.
02.24.18.02	Grades earned in prerequisite courses, if graduate level, are included in the graduate GPA and, irrespective of level, in the determination of standards of scholarship.
<b>02.24.19</b>	<b>Credit for Coursework Taken as a Non-Matriculated Student</b>
	A matriculated student may be allowed credit for up to 9 s.h. of graduate coursework, graded "B" or higher, taken before matriculation. These credits may be accepted in addition to the Advanced Standing Credit allowed if approved by the dean and the graduate council or other governance body of the school/college.
<b>02.24.20</b>	<b>Advanced Standing Credit</b> (defined as credit for coursework taken prior to matriculation and outside of Temple University)
02.24.20.01	Graduate coursework taken at an accredited institution prior to matriculation, and graded "B" or higher, may be accepted toward a Temple University master's degree. (Refer to Graduate School Policy 02.24.21.02 for limitations.)

02.24.20.02	Graduate coursework taken at an accredited institution prior to matriculation and graded "B" or higher as part of a master's degree program may be accepted for Advanced Standing Credit toward a doctoral degree. For doctoral programs that do not require the student to complete a master's degree at Temple University, the number of Advanced Standing Credits that may be accepted by a doctoral program cannot exceed the number of graduate s.h. required for the master's degree in the same or a closely related discipline at Temple University. Individual programs may have more restrictive limits on the number of graduate s.h. eligible to be considered for Advanced Standing Credit. The deans of the school/college and the graduate council or other governance body determine the courses to be deemed eligible.
02.24.20.03	For a student to receive Advanced Standing Credit, the graduate program director must make a recommendation to the dean of the school/college to accept the student's credits from a master's degree or other graduate work taken prior to matriculation in the degree program, whether the previous work was taken at Temple University or at another institution. The dean of the school/college has final authority over accepting the recommendation to grant Advanced Standing Credit in individual cases as long as the number and type of credits accepted do not exceed those allowed by the Graduate School.
<b>02.24.21</b>	<b>Transfer Credit</b> (defined as credit for coursework taken following matriculation and outside of Temple University)
02.24.21.01	The dean of the school/college and the graduate council or other governance body may accept a limited number of Transfer Credits. The coursework must be graduate level, taken at an accredited institution, and graded "B" or higher. (Refer to Graduate School Policy 02.24.21.02 for limitations.)
02.24.21.02	The combined number of Transfer Credits and Advanced Standing Credits (see Graduate School Policies 02.24.20.01 and 02.24.21.01) that may be accepted by a master's program cannot exceed 20% of the s.h. required for the degree (e.g., in a 30-s.h. master's degree, a maximum of 6 s.h. of credit is allowed).
02.24.21.03	A doctoral program may accept as many Transfer Credits as have been approved by the dean of the school/college up to the limit established by the Graduate School.
02.24.21.04	The Graduate School may be petitioned for an exception if the request is supported by the student's program and school/college.
<b>02.24.22</b>	<b>Auditing</b>
	A student may audit a course with the written permission of the instructor at the time of registration. For this purpose, a Special Approval Form must be signed by the instructor and submitted along with a Registration/Schedule Revision Form. The student must register for the course and pay the regular per-credit fee.
02.24.22.01	The registration for any course may not be changed from audit to credit or vice versa after the second week of classes during the Fall or Spring term or after the first three days of classes during the Summer sessions.
02.24.22.02	Audited courses do not meet prerequisite or graduation requirements.
<b>02.24.23</b>	<b>Withdrawal</b>
02.24.23.01	A student may "drop" a class during the first two weeks of the Fall or Spring term or Summer sessions and during customized drop/add/withdrawal dates set by Temple University. The course is removed from the transcript. The student is not financially responsible for the dropped course(s).
	A student who wishes to discontinue a course after the drop period has ended may "withdraw" from a class during weeks three through nine of the Fall or Spring term; during weeks three and four of Summer sessions; and during customized drop/add/withdrawal dates set by Temple University. The course is recorded on the transcript with the notation of "W." The student is financially responsible for the course(s) from which they have withdrawn.
02.24.23.02	A student who must withdraw due to circumstances beyond their control may petition for an "excused withdrawal" or "withdrawal with approved excuse." The extenuating circumstances that inhibit continued enrollment at Temple University are limited to serious medical conditions, serious family emergencies, military deployment, the student's death, and other catastrophic circumstances.
	An excused withdrawal is generally only approved for all courses in a term. In exceptional cases, an excused withdrawal can be approved for a single course when the need to withdraw is directly attributed to requirements related to that course. To request an excused withdrawal, a "Petition for Withdrawal with Approved Excuse" must be filed within one year from the end date of the term for which the student seeks the excused withdrawal. Learn more at <a href="https://registrar.temple.edu/excused-withdrawal">https://registrar.temple.edu/excused-withdrawal</a> . If the excused withdrawal is granted:
	<ul style="list-style-type: none"> <li>• The course is recorded on the transcript with the notation of "WE."</li> <li>• The student may be financially responsible for courses from which they have withdrawn with an approved excuse.</li> <li>• A student who is granted an excused withdrawal for medical reasons will not be permitted to return to the university until they present a statement from a medical provider showing that they are medically ready to return to the rigors of academic work.</li> </ul>

<b>02.25</b>	<b>CURRENCY AND TIME LIMITS</b>
	Courses taken prior to matriculation may be counted toward a degree only if they meet the program's criteria for currency. Generally, courses taken within the past five years are considered current. In some schools and colleges, coursework taken in a master's degree more than five years prior to matriculation may be considered eligible for Advanced Standing Credit.
<b>02.25.11</b>	<b>Continuous Enrollment/Registration</b>
	To remain in Academic Good Standing, a graduate student must maintain continuous enrollment (i.e., 1 or more s.h. each Fall and Spring; also in the Summer for those students graduating in Summer) from the term of matriculation through the term of graduation. The only exception for continuous enrollment/registration is for a student on a Leave of Absence.
02.25.11.01	A graduate student who is not continuously enrolled for two consecutive terms — whether as a result of not returning from an approved Leave of Absence term or because a Leave of Absence was never requested — is considered inactive, must apply for readmission, and must be accepted to the graduate program in order to continue. Readmitted graduate students do not retain their original Bulletin year and must follow the most current requirements for the graduate degree program.
<b>02.25.12</b>	<b>Full-Time Status</b>
02.25.12.01	To be designated full-time, a graduate student (including all recipients of Graduate School Fellowships) must be enrolled for 9 or more s.h. of coursework until all coursework is completed.
02.25.12.02	To be designated full-time, a graduate student who holds an Assistantship that requires at least 20 hours of service per week must be enrolled in 6 s.h. until all coursework is completed.
02.25.12.03	To be designated full-time, a graduate student who has completed required coursework for the degree must be enrolled in at least 1 s.h. of one of the following:
	9284 - Music Doctoral Performance
	9994 - Preliminary Examination
	9998 - Dissertation Proposal
	9999 - Dissertation Research
	OR any other terminal or culminating experience or project required beyond coursework to complete the degree, including Music Master Performance (9184), Master's or MFA Project (9995), and Master's Thesis (9996).
<b>02.25.13</b>	<b>Conditions of Full-Time Status</b>
02.25.13.01	No limit is set on the number of terms a student may be classified as full-time, although the expected time-to-degree is an important consideration. See the Graduate Bulletin for each program's allotted length.
02.25.13.03	A graduate student who has completed coursework and is enrolled in at least 1 s.h. of:
	9184 - Music Master Performance
	9284 - Music Doctoral Performance
	9994 - Preliminary Examination
	9995 - Master's or MFA Project
	9996 - Master's Thesis
	9998 - Dissertation Proposal
	9999 - Dissertation Research
	will automatically be classified as full-time. Contact the Graduate School about full-time status concerns only when exceptional circumstances warrant.
<b>02.25.14</b>	<b>Leave of Absence</b>
02.25.14.01	The dean of the school/college, on the recommendation of the advisor, may grant a matriculated student a Leave of Absence upon presentation of a completed "Leave of Absence Request" form. The form is found in TUportal under the Tools tab within "University Forms." A Leave of Absence must be in place by the end of each term's schedule revision period.
02.25.14.02.02	While on a Leave of Absence, a student retains admitted student status and remains eligible for the following privileges:
	<ul style="list-style-type: none"> <li>• Retention of the university requirements in place for their academic program at the time of their first term at Temple and the requirements in place for their degree or degree concentration at the time of declaration.</li> <li>• Temple email access.</li> <li>• Priority and self-registration for the approved term of return.</li> <li>• Library access and borrowing privileges.</li> </ul>
02.25.14.02.03	A student granted a Leave of Absence is not considered a registered student. As a non-enrolled student, they are not eligible for:

- Academic advising related to progress toward completion of the degree while on a Leave of Absence.
- Financial aid disbursements during the terms while on a Leave of Absence. Students on a Leave of Absence are reported to lenders and loan service agencies as "not enrolled" and need to contact lenders for information on possible repayment requirements.
- Enrollment verification, given their status as "not enrolled," which could affect eligibility for health insurance, etc., while on a Leave of Absence.
- Use of Student Health Services or any other university services not listed in Graduate School Policy 02.25.14.02.02 above while on a Leave of Absence.
- Campus Housing while on a Leave of Absence.

02.25.14.03 A Leave of Absence does not extend the time limit for completing a graduate degree. A student may not be granted more than four terms of leave except for a serious condition.

#### **02.25.15 Time Limits for a Degree**

02.25.15.01 The time limit begins with the term of matriculation and ends with the term in which the degree is earned.

02.25.15.02 The time limits for a master's degree are three to six years. See the program descriptions in the Graduate Bulletin.

02.25.15.03 The time limit for a doctoral degree is seven years.

02.25.15.04 An extension of time may be requested by master's and doctoral candidates. To ensure currency, a student who requests an extension of time beyond that allowed for a graduate degree may be required to retake coursework and/or examinations.

#### **02.26 MASTER'S EXAMINATION AND THESIS**

##### **02.26.11 Master's Examinations**

02.26.11.01 A student may take the master's comprehensive examination, in whole or in part, no more than twice.

02.26.11.02 A student who fails all or part of the comprehensive examination twice is dismissed.

##### **02.26.12 Master's Thesis**

02.26.12.01 For current requirements, see the specific degree program in the Graduate Bulletin.

02.26.12.02 A thesis must be completed in a format approved by the Graduate School and the school/college. Approved formats are listed in the Dissertation and Thesis Handbook, found at <https://grad.temple.edu/resources/dissertation-thesis-handbook>.

#### **02.27 DOCTORAL EXAMINATIONS/CULMINATING EXPERIENCES**

Doctoral Examinations/Culminating Experiences require a minimum of 6 s.h., with at least 2 s.h. of the 6 s.h. required to be in course number 9999. The remaining 4 s.h. can be a combination of the following course numbers: 9994, 9998, and/or 9999. Departments may require additional s.h. to fulfill Doctoral Examinations/Culminating Experiences since 6 s.h. constitute the minimum requirement. Doctoral students must maintain continuous enrollment from matriculation to graduation.

##### **02.27.11 Preliminary Examinations**

02.27.11.01 A doctoral student who has completed all coursework for the degree, but has not passed the preliminary examination, must register each Fall and Spring term for 1 s.h. of course number 9994, "Preliminary Examination Preparation." The student must be registered for 9994 in the term in which the examination is taken, including the Summer session. A student who is required to retake the preliminary examination in whole or in part must re-register for 1 s.h. of 9994 in the term in which the examination is retaken.

02.27.11.02 A student may take the doctoral preliminary examination, in whole or in part, no more than twice.

02.27.11.03 A student who fails all or part of the preliminary examination twice is dismissed.

02.27.11.04 Three or more members of the Graduate Faculty must approve the content of the doctoral preliminary examination. It must be graded fairly and in a manner that prohibits any one faculty member from determining whether a student passes or fails.

##### **02.27.12 Preliminary Examination Time Limits**

02.27.12.01 To ensure currency, a doctoral student who has not successfully defended the dissertation within five years of passing the preliminary examination may be required to retake and pass that examination to remain in Academic Good Standing.

02.27.12.02 When the five-year limit is reached, the student is to be notified by the school/college/program if they must retake and pass the preliminary examination within one term.

02.27.12.03 Failure to retake and pass the preliminary examination within one term results in dismissal by the school/college/program.

##### **02.27.13 Elevation to Candidacy**

A doctoral student is elevated to candidacy upon completion of all coursework and examination requirements (including foreign language or other proficiency examinations) for the degree after filing an approved dissertation proposal along with the "Dissertation Proposal Transmittal for Elevation to Candidacy" form, found in TUportal under the Tools tab within "University Forms," to the Graduate School.

<b>02.28</b>	<b>DOCTORAL DISSERTATION</b>
<b>02.28.11</b>	<b>Doctoral Advisory Committee/Sponsoring Committee</b>
02.28.11.01	A sponsoring committee must include at least three members of the Temple University Graduate Faculty, two of whom, including the chair, must be members of the candidate's degree program or approved to serve in that capacity with the advanced written approval of the Graduate School.
02.28.11.02	A committee may be expanded to include other Temple University faculty and/or qualified experts from outside Temple University, provided that a majority of the members of the Doctoral Advisory Committee are members of the Temple University Graduate Faculty.
02.28.11.03	If the proposed additional member is not a member of the Graduate Faculty, the chair of the Doctoral Advisory Committee must request approval by submitting the "Nomination for Service on Doctoral Committee" form, found in TUportal under the Tools tab within "University Forms," and a current curriculum vitae to the Graduate School. Approval of the member must be received prior to the approved proposal being filed with the Graduate School.
02.28.11.04	If a change is made in the composition of the Doctoral Advisory Committee, the change must be approved by the chair of the initial committee and the dean of the school/college. The change must be noted on the "Request for Change in Dissertation Committee" form, found in TUportal under the Tools tab within "University Forms," and filed with the Graduate School prior to posting the final defense.
02.28.11.05	The dean of the school/college and the graduate council or other governance body define who is responsible for approving the composition of Doctoral Advisory Committees in their respective school/college.
02.28.11.06	The chair and each member of the Doctoral Advisory Committee work with the student to provide guidance to develop a proposal in which the student demonstrates broad knowledge of the field, current methods of investigation, and the ability to conduct the proposed research on a realistic timeline.
02.28.11.07	Emeritus faculty may serve on a dissertation sponsoring or examination committee provided the emeritus faculty member retains Graduate Faculty status by continuing to satisfy college/department criteria and responsibilities established for Graduate Faculty status.
02.28.11.08	Emeritus faculty may chair dissertations if: <ul style="list-style-type: none"> <li>• the emeritus faculty member was the chair of an approved dissertation proposal submitted to the Graduate School prior to retirement; and</li> <li>• the emeritus faculty member continues to satisfy college/department criteria and responsibilities established for Graduate Faculty to chair dissertations.</li> </ul>
<b>02.28.12</b>	<b>Dissertation Proposal</b>
02.28.12.01	A student who has passed preliminary examinations but has not filed an approved dissertation proposal with the Graduate School by the last day to Drop/Add in the term must register each Fall and Spring for course number 9998, "Pre-Dissertation Research."
02.28.12.02	When all members of the Doctoral Advisory Committee have signed the proposal, the proposal represents an agreement between the student and the committee that the theoretical and methodological approaches being taken are considered acceptable if the work is conducted appropriately and within the timeline proposed. The Doctoral Advisory Committee may not unilaterally require significant theoretical or methodological changes. The committee and the student may jointly agree on such changes but are advised to put the changes in writing.
02.28.12.03	Within 30 days of all members of the Doctoral Advisory Committee signing the proposal, it must be filed with the student's department and with the Graduate School. The proposal must include an official "Dissertation Proposal Transmittal for Elevation to Candidacy" form, found in TUportal under the Tools tab within "University Forms," that bears the signatures of the Doctoral Advisory Committee members and the date approved.
<b>02.28.13</b>	<b>Dissertation Research</b>
02.28.13.01	A doctoral candidate must register each Fall and Spring term, and in the term in which the oral examination is held, for course number 9999, "Dissertation Research."
02.28.13.02	If the oral examination is held in the Summer session, the student must register for 9999 in the Summer session but will not be required to register in the Fall if the 30-day deadline for making final revisions extends into the Fall.
02.28.13.03	A doctoral student must complete a minimum of 2 s.h. of course number 9999, "Dissertation Research," after elevation to candidacy.
<b>02.28.14</b>	<b>Defense of Doctoral Dissertation</b>
02.28.14.01	To be defensible, a doctoral dissertation must:



- meet the standards for original research or other creative work in the field;
- uphold the ethics and standards governing research or creative work in the discipline;
- demonstrate mastery of the research methodology and subject matter;
- demonstrate an understanding of the contribution of the body of knowledge to the discipline or disciplines involved; and
- meet the standard of writing and presentation expected in any academic or scholarly publication or production, including grammar, spelling, formatting, and general readability.

02.28.14.02	A candidate whose dissertation fulfills the standards of scholarship and the commitments made in the proposal, and any modifications made to it as specified above, is entitled to an oral defense of the dissertation.
<b>02.28.15</b>	<b>Dissertation Examining Committee</b>
02.28.15.01	A Dissertation Examining Committee is responsible for evaluating the quality of the dissertation and conducting the oral defense.
02.28.15.02	A Dissertation Examining Committee must include the chair and all members of the Doctoral Advisory Committee and at least one outside examiner not previously involved with the dissertation writing or the Doctoral Advisory Committee.
02.28.15.03	The chair of the Dissertation Examining Committee must be a member of the Graduate Faculty but may not be the chair of the candidate's Doctoral Advisory Committee. This person, responsible for coordinating the defense, must be identified when the defense is posted with the Graduate School. If the dean of the school/college and the graduate council have a written policy that calls for the chair of the Dissertation Examining Committee to be elected only when the defense is convened, the person named in the posting to the Graduate School remains responsible for filing all official forms with the school/college and Graduate School.
02.28.15.04	The outside examiner may not be a faculty member in the candidate's degree program. The examiner must be doctorally prepared and, if they are from outside Temple University, must be approved by the Graduate School at least three weeks prior to the oral defense.
02.28.15.05	If the outside examiner or any other proposed member of the Dissertation Examining Committee is not a member of the Graduate Faculty, the chair of the Doctoral Advisory Committee must request approval by submitting the "Nomination for Service on Doctoral Committee" form, found in TUportal under the Tools tab within "University Forms," and a current curriculum vitae to the Graduate School at least four weeks in advance of the scheduled defense. Approval must be received prior to posting the oral defense.
<b>02.28.16</b>	<b>Oral Defense/Final Examination</b>
02.28.16.01	To be eligible to post the Oral Defense/Final Examination, the candidate must have: <ul style="list-style-type: none"> <li>• an approved Dissertation Examining Committee;</li> <li>• distributed a complete copy of the final dissertation to all members of the Dissertation Examining Committee; and</li> <li>• identified the chair or the person responsible for the Dissertation Examining Committee in accordance with the policies of the school/college.</li> </ul>
02.28.16.02	The candidate must submit the official, signed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," to the Graduate School 10 or more working days before the scheduled defense. A defense cannot be held without written confirmation of approval and receipt of the defense paperwork from the Graduate School.
02.28.16.03	The announcement of the oral defense must be posted publicly. Any member of the Graduate Faculty has the right to request a copy of the dissertation from the dean of the school/college in advance of the defense and may participate in the defense.
02.28.16.04	If a person other than a member of the Dissertation Examining Committee or Graduate Faculty wishes to be present at the oral defense as a guest, the chair of the Dissertation Examining Committee is responsible for determining the appropriateness of the request and for making the final decision.
02.28.16.05	All members of the Dissertation Examining Committee must be physically present for the defense, except in the case of an emergency. The Graduate School may, in serious circumstances, give prior written approval for no more than one member to be absent. The candidate and chair of the Doctoral Advisory Committee must, however, both be present for a valid defense.
02.28.16.06	A member of the Dissertation Examining Committee whose absence has been approved by the Graduate School must still participate in the defense through some means (e.g., telephone, video-conference, written comments, and/or questions to be asked by another member), except in the case of a sudden, serious emergency.

02.28.16.07	The Dissertation Examining Committee evaluates both the dissertation and a candidate's performance in the oral examination to determine whether or not the candidate passes. Only officially recognized members of a Dissertation Examining Committee have the authority to determine whether or not the candidate passes the final defense.
<b>02.28.17</b>	<b>Revisions Following the Oral Defense</b>
02.28.17.01	Doctoral candidates who pass the oral defense may be required to make revisions to the dissertation as a condition of completing the degree. The chair of the Doctoral Advisory Committee is typically responsible to review and approve revisions, although any member of the Dissertation Examining Committee may require the candidate to submit a final draft for approval. The final revised dissertation must be submitted to the Graduate School within 30 calendar days of the oral defense or the defense is nullified and another oral defense must be scheduled.
02.28.17.02	If a Dissertation Examining Committee requires substantial revisions that cannot be made within 30 calendar days, the committee must suspend the defense until a majority agrees that the dissertation is sufficiently revised to be defensible. A candidate must repost the oral defense with the Graduate School. The chair of the Doctoral Advisory Committee is responsible for notifying the Graduate School that a defense was suspended.
<b>02.28.18</b>	<b>Dissertation Format</b>
	A dissertation must be completed in a format approved by the Graduate School and the school/college. Approved formats are listed in the Dissertation and Thesis Handbook, found at <a href="https://grad.temple.edu/resources/dissertation-thesis-handbook">https://grad.temple.edu/resources/dissertation-thesis-handbook</a> .
<b>02.28.19</b>	<b>Authorship and Prior Publication</b>
	A doctoral dissertation may have only one author. A candidate's previously published work may be included in the dissertation if the work meets the following criteria:
	<ul style="list-style-type: none"> <li>• The research was conducted by the candidate while a doctoral student at Temple University.</li> <li>• It has not been used to meet the requirements for another degree.</li> <li>• It is not co-authored, unless the role of the candidate was clearly defined in the co-authored work.</li> <li>• It is logically connected with and integrated into the dissertation.</li> <li>• By its inclusion, it does not violate any existing copyright or contractual agreement.</li> <li>• Co-authored works that do not meet the criteria above may be included as appendices if they include the names of all authors and the contribution of the candidate is stated.</li> </ul>
<b>02.28.20</b>	<b>Filing Dissertations</b>
	The Dissertation and Thesis Handbook, found at <a href="https://grad.temple.edu/resources/dissertation-thesis-handbook">https://grad.temple.edu/resources/dissertation-thesis-handbook</a> , details requirements for filing the final dissertation with the Graduate School.
<b>02.28.21</b>	<b>Final Authority Over Doctoral Dissertation</b>
	The Graduate School and the Graduate Board have the authority to review and approve all doctoral dissertations prior to awarding the degree.
<b>02.29</b>	<b>ACADEMIC APPEALS TO THE GRADUATE BOARD</b>
02.29.11.01	Title IX of the Educational Amendments Act requires that each college or university establish due procedures for the resolution of grievances. A student should consult their school/college for information about filing grievances.
02.29.11.02	A graduate student must follow all school/college and departmental policies and procedures governing grade appeals and appeals for all other academic matters. The Graduate Board and Graduate School have authority over reinstatement after academic or administrative dismissal. A student must file a "Petition to the Graduate School or Graduate Board Student Appeals Committee for Reinstatement," found in TUportal under the Tools tab within "University Forms," with the Graduate School to initiate an appeal to either body for reinstatement. A student who has been academically or administratively dismissed and no longer has access to TUportal should contact the Graduate School for a copy of the reinstatement form.
<b>02.29.12</b>	<b>Petitions for Reinstatement After Academic Dismissal</b>
	A graduate student may file a "Petition to the Graduate School or Graduate Board Student Appeals Committee for Reinstatement," found in TUportal under the Tools tab within "University Forms" or available from the Graduate School directly, with the Graduate Board Student Appeals Committee following dismissal:
02.29.12.01	If the student has failed the comprehensive or preliminary examinations, in whole or in part, twice.
02.29.12.02	If the student has failed to maintain satisfactory grades in accordance with Standards of Scholarship in the university, school/college, and/or program.
02.29.12.03	If the student has failed to make academic progress as defined by the school/college and program.
<b>02.29.13</b>	<b>Petitions for Reinstatement After Administrative Dismissal</b>

A student who has been administratively dismissed (i.e., has exceeded the time limit or failed to maintain continuous enrollment and is therefore ineligible to register, or who has withdrawn) may file a "Petition to the Graduate School or Graduate Board Student Appeals Committee for Reinstatement" by first contacting the Graduate School for a copy of the reinstatement form. A representative for the Graduate School may respond to these petitions administratively or refer them to the Graduate Board Student Appeals Committee.

**02.29.14 Appeals of Graduate Board Decisions**

A student can appeal decisions by the Graduate Board Student Appeals Committee only on procedural grounds. The appeal should be directed to the Provost.

**02.29.15 Readmission**

A student who has withdrawn, been dismissed for failure to maintain continuous enrollment for more than one term, or has exceeded the time limit and is therefore ineligible to register, may be required to file a new Application for Admission. See <https://grad.temple.edu/admissions/how-apply> for the appropriate application link at Temple University. If accepted, the student is considered newly matriculated at the time of admission and will be required to complete all current program requirements.

**02.30 EXIT REQUIREMENTS (Restatement of Graduate School Policy 02.23.15.04 on Applying for Graduation)**

All students must apply for graduation and pay the associated fees by the deadline listed in the Temple University Academic Calendar and/or in the version of the Graduate School Calendar adapted for graduate students. This is the only means by which a diploma is produced and an awarded degree transcribed. The graduation application is accessed through TUportal by selecting **Self Service Banner (SSB)**, then **Student » >Student Records » > Apply to Graduate**.

## FERPA/Privacy Guidelines

As required by the Family Educational Rights and Privacy Act (FERPA) of 1974, with certain exceptions, Temple University generally cannot disclose a student's education records without the written consent of a student or without proof by a parent that the student is dependent on their parent(s) for federal income tax purposes.

FERPA provides the following rights for students and for parents of dependent students attending Temple University:

- The right of a student, with minor limitations, to inspect and review their education records.
- The right to request amendment of a student's education records to ensure that they are not inaccurate, misleading or otherwise in violation of the student's privacy or other rights.
- The right, with certain exceptions, to consent to disclosures of personally identifiable information contained in the student's education records.
- The right to withhold public disclosure of any or all items of so-called "Directory Information" by written notification within two weeks after publication of this notice. Under current university policy, the item "Directory Information" includes a student's name, street address, e-mail address, confirmation of enrollment status (full-time/part-time), dates of attendance, degree received, awards received, major field of study, participation in officially recognized activities and sports, and weight and height of members of athletic teams.
- The right to file a complaint with the U.S. Department of Education concerning the alleged failure of Temple University to comply with the requirements of FERPA and of the implementing regulations.

The procedures for exercising the above rights are explained in the Policy 03.20.11: Policy Regarding Confidentiality of Student Records, which includes a description of the types and locations of educational records maintained by the university.

If you or your parents' primary or home language is not English, upon your request, reasonable effort is made to provide you with a translated copy of this "Annual Notice," as well as with "Temple University's Guidelines Pertaining to Confidentiality of Student Records."

Please note that, in compliance with a 1997 federal statute designed to advance military recruiting, Temple may release dates of birth to the military unless the student notifies Temple that they want this information withheld.

## FERPA Waiver

A student may consent to the release of information from education records to parents, guardians or other appropriate persons. Students may provide the university with their consent by completing the FERPA waiver online via TUportal. Once logged into TUportal, click on the "Self-Service Banner" link, then click the "Student" link, and then the "FERPA Contacts" link. After reading the informational text, click the "New Contact" link and enter the requested information before clicking the "Submit Changes" link.

## Scope of Policy and Rationale for Students Called to Military Service Obligation

Temple University is governed by federal and state laws on the duties to and the rights of students who are members of the U.S. Armed Forces, including the National Guard and the reserves, when they are temporarily unable to attend classes or have to suspend their studies due to service requirements. Policy 03.70.11: Temple University Policy for Students Called to Military Service Obligation is intended to conform fully to pertinent federal and state laws.

## Policy Statement

### I. Withdrawal from classes for a military service obligation:

1. Students called to a military service obligation should contact the Office of the University Registrar, Second Floor, Conwell Hall. Each such student has the following options:
  - a. If prior to the official drop/add deadline, drop classes and receive a full refund.
  - b. If after the official drop/add deadline, drop from classes and receive a full refund. A grade notation of "M" will be applied to each course to indicate drop due to military obligation.
  - c. Receive an "Incomplete (I)" if eligible according to university policy. If the student chooses this option, then if the student is not able to fulfill the course completion requirement(s), regardless of the circumstances, the student cannot later choose option "a" above. (See Policy 02.10.13: Incomplete Coursework.)
2. Students should provide advance written notice with supporting documents of their military service obligation to the Office of the University Registrar.
  - a. If unable to provide advance notice of the military service due to military necessity, students will submit at the time of reenrollment an attestation that the student performed service in the uniformed services that necessitated the student's absence from the institution.

### II. Reenrollment for service members after a military service obligation:

1. Students will be promptly reenrolled with the same academic status<sup>1</sup> when last in attendance or last admitted, subject to paragraphs 2 and 3 below. Temple will make reasonable efforts<sup>2</sup> at no extra cost to the students to help them become prepared or to enable the students to complete their program. However, if it is determined after reasonable efforts, that any such student is unable to complete their program or that there are no reasonable efforts that can be taken to prepare the student to resume the program at the point where they left off or to enable the student to complete the program, Temple is not required to readmit the student upon their return.
2. Students will be promptly reenrolled if the cumulative length of the absence and of all previous absences by reason of service in the uniformed services does not exceed five years. Students whose previous absences cumulatively exceed five years are subject to the established reenrollment policy and procedures.
3. Students who seek reenrollment will provide to Temple documentation to establish that the student has not exceeded the service limitation of total cumulative absence of five years.

### III. Additional Services

Graduate students may have special problems resulting from a military service obligation, such as a maximum number of years permitted to complete a particular academic program. Graduate students who need an extension or adjustment to their programs due to military service obligations should contact the Graduate School, Fifth Floor, Carnell Hall.

Veterans' tuition benefits at Temple are administered by the Office of the University Registrar.

1

"Academic status" is defined by the Code of Federal Regulations, 34 CFR 668.18, et seq.

2

"Reasonable efforts" is defined by the Code of Federal Regulations, 34 CFR 668.18, et seq.

## Notes

### 1. **Dates of official enactment and amendments:**

Amended by the President on September 20, 2001. First effective Fall 2001.

Amended by the President in May 2015. First effective December 3, 2014.

### 2. **History:**

Supersedes Presidential Policy Statement No. I-23, Temple University Policy for Students Called to Active Military Service.

Supersedes previous version designated as Presidential Policy 03.70.11, Temple University Policy for Students Called to Military Action.

The December 2014 amendment aligns Temple's policy with requirements of the Department of Defense readmission policies and Department of Education requirements for returning service members (ED 34 C.F.R. 668.8 and 668.18 respectively).

### 3. **Cross References:**

- Policy 04.14.11: Employment and Reemployment Rights of Temple University Employees Who Serve on Active Military Duty
- Policy 02.20.11: Leave of Absence (Graduate)
- Policy 02.10.13: Incomplete Coursework

# Cost and Aid

## Pennsylvania Residency Classification

Based on a student's domicile, Temple University has two tuition schedules. One is relevant for Pennsylvania residents, and the other for out-of-state residents and international students. For tuition purposes, Pennsylvania residency is determined in accordance with the criteria outlined in the "Pennsylvania Residency Guidelines." Questions about Pennsylvania residency, individual student status, change of domicile, or appeals for residency classification are answered on the website of the Office of the University Registrar.

## 2023-2024 Tuition

### Graduate Programs and Certificates

Tuition costs for all graduate programs and certificates are priced per credit, as shown below by school and college. The amounts listed are applicable for the Fall and Spring terms, as well as the various Summer sessions, of the 2023-2024 academic year:

School/College/Program	Pennsylvania Out-of-State	
	Residents	Residents
<b>Tyler School of Art and Architecture</b>	\$1,053	\$1,449
w/the exception of Architecture programs	\$1,262	\$1,658
w/the exception of Fine Arts (MFA) programs	\$1,266	\$1,682
<b>Fox School of Business and Management</b>		
Business Administration MBA (Full-Time, Part-Time, Online) <sup>1</sup>	\$1,250	\$1,250
Executive MBA	\$1,900	\$1,900
Executive DBA	\$2,200	\$2,200
Master's programs (non-MBA) <sup>1</sup>	\$1,165	\$1,165
PhD programs	\$1,000	\$1,250
Graduate certificates	\$1,000	\$1,150
<b>Kornberg School of Dentistry</b>	\$1,549	\$1,549
<b>College of Education and Human Development</b>	\$1,053	\$1,449
w/the exception of Executive Educational Leadership programs	\$1,184	\$1,513
w/the exception of Jamaica master's program	\$433	\$433
w/the exception of Jamaica doctoral program	\$731	\$731
<b>College of Engineering</b>	\$1,280	\$1,675
<b>Beasley School of Law</b>	\$1,165	\$1,165
<b>College of Liberal Arts</b>	\$1,053	\$1,449
<b>Lew Klein College of Media and Communication</b>	\$1,169	\$1,565
<b>Lewis Katz School of Medicine</b>		
Biomedical Sciences	\$992	\$1,360
Physician Assistant	\$774	\$812
Urban Bioethics	\$1,984	\$2,341

<b>Center for the Performing and Cinematic Arts/Boyer College of Music and Dance</b>	\$1,187	\$1,583
w/the exception of Music Education MM (online)	\$871	\$871
<b>Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts</b>	\$1,169	\$1,565
<b>School of Pharmacy</b>	\$1,186	\$1,475
<b>College of Public Health</b>	\$1,109	\$1,521
w/the exception of Social Work	\$1,053	\$1,449
w/the exception of online programs in Public Health and Social Work	\$1,087	\$1,087
<b>College of Science and Technology</b>	\$1,301	\$1,696
w/the exception of Information Science and Technology MS (online)	\$923	\$923
<b>School of Sport, Tourism and Hospitality Management</b>	\$956	\$956
Hospitality Management MS and Sport Business MS	\$956	\$1,100
Graduate certificates	\$900	\$1,050

1

A one-time program fee of \$750 is required in the term of admission.

### Professional Programs and Certificates

Tuition costs for all professional programs and certificates are priced per academic year, except where per credit pricing is indicated, as shown below by school and college. The amounts listed are applicable for the 2023-2024 academic year:

School/College/Program	Pennsylvania Out-of-State	
	Residents	Residents
<b>Kornberg School of Dentistry</b>		
DMD		
> Dentistry	\$67,800	\$77,308
> Dentistry/Advanced Standing Program for Internationally Trained Dentists	\$94,886	\$94,886
Dentistry Certificates		
> Dental Public Health	\$47,494	\$47,494
> Endodontics, Orthodontics, or Periodontics	\$68,130	\$76,566
Post-Baccalaureate Program (PreDental)	\$46,366	\$46,366
<b>Beasley School of Law</b>		
JD <sup>1</sup>		
> Day	\$29,842	\$45,738
> Evening	\$23,878	\$36,604
> Part-Time (per credit)	\$1,155	\$1,850
LLM		
> International Law	\$34,320	\$34,320
> International Law (per credit)	\$1,560	\$1,560
> Trial Advocacy	\$29,200	\$29,200
SJD (per credit) <sup>2</sup>	\$1,155	\$1,850
Special Programs		
> Summer Abroad - Rome <sup>3</sup>	\$3,700	\$3,700

> Summer Law - Washington DC (per credit) <sup>4</sup>	\$1,155	\$1,155
> Temple - China (15 months)	\$27,000	\$27,000
<b>Lewis Katz School of Medicine</b>		
MD	\$56,080	\$59,462
Post-Baccalaureate Program		
> Advanced Core Medical Science <sup>5</sup>	\$30,294	\$37,372
> Basic Core Medical Science <sup>6</sup>	\$30,294	\$37,372
<b>School of Pharmacy</b>		
PharmD	\$38,452	\$41,250
PharmD (per credit)	\$1,046	\$1,193
<b>School of Podiatric Medicine</b>		
DPM	\$45,074	\$47,098

1

In addition to University-wide fees, all JD students, whether studying full- or part-time, are assessed a Student Bar Association fee of \$70.

2

All SJD students are assessed a \$12,000 matriculation fee in the term of admission.

3

A program fee of \$400 is billed separately for the Rome Summer Abroad program.

4

A program fee of \$500 is billed separately for the Washington DC Summer program.

5

Tuition rate assumes study in the Fall and Spring terms.

6

Tuition rate assumes study in the Fall and Spring terms, as well as two Summer sessions.

Visit <https://bursar.temple.edu/tuition-and-fees/tuition-rates> for a full tuition schedule and access to the tuition calculator.

## 2023-2024 Fees

Each academic term, all enrolled students are assessed the "University Services Fee," which funds student activities, computers and technology, facilities, and student health services. The fees below are for the 2023-2024 academic year:

# of Credits	Fall and Spring Terms Fee	Fee per Summer Session
9+	\$484	\$244
5.0-8.9	\$347	\$184
1.0-4.9	\$177	\$111

Other fees are exclusive to graduate students on an "event" basis:

Graduate School Event	Fee
Online Application	\$60
Deposit	\$100 minimum <sup>1</sup>
Matriculation	\$85 <sup>2</sup>
Leave of Absence	\$25

1

Inquire of the department as deposit amounts vary by program.

2

A one-time charge is assessed for all first-year graduate students who are degree-seeking candidates. This fee is due in the initial semester after admission and includes student orientation.

All tuition and fees are subject to change by action of the Board of Trustees.

Disclaimer: Tuition and fees are set annually each summer, regardless of the method of instruction. Temple University expressly reserves the right to deliver some or all instruction remotely at its discretion. Tuition, the university services fee and certain other fees are required to be paid in full and will not be refunded regardless of the method of instruction, the inability to access university-maintained facilities, or any disruption to or cancellation of classes, activities, events, services or programs.

## Veteran/Military Education Benefits

Temple University will not impose any penalty—including the assessment of late fees; the denial of access to classes, libraries or other institutional facilities; or the requirement that a covered individual borrow additional funds—on any covered individual because of the individual's inability to meet their financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

Temple University will impose a late fee and financial hold for those students who have an outstanding balance beyond the amount of expected VA tuition and fee payment for the term.

## About

To qualify for most types of financial aid, students must first be admitted to a graduate program. Note that some graduate programs require that the FAFSA be completed no later than February 1 for scholarship opportunities.

The majority of graduate student financial aid administered by Temple University's Office of Student Financial Services (SFS) is in the form of federal loan and work-study programs. For information on funding resources offered through the Graduate School, visit the Graduate School website. In addition, Temple University's Office of Scholar Development and Fellowships Advising extends graduate student scholarship opportunities and provides workshops, information sessions and individual appointments.

Professional and graduate programs found on the Temple University Health Sciences Campus (HSC) are administered by the HSC Student Financial Services Office. HSC graduate students must complete the HSC Graduate Student Enrollment Form.

Review the frequently asked questions on SFS's Graduate Students webpage. Direct questions about financial assistance to SFS.

## Federal Eligibility Determination

To receive and retain student financial aid, including Federal Direct and PLUS Loans, graduate and professional students must file the annual FAFSA and meet certain eligibility requirements. Federal Direct Unsubsidized and PLUS Loans require graduate students to be enrolled at least half time during each semester, i.e., taking a minimum of

4.5 credits. Dissertation students are advised to ask their graduate department about enrollment information.

Semester enrollment and additional resources must be considered when determining eligibility for the Federal Unsubsidized Direct Loan, PLUS Loan and Work-Study programs. Most financial aid awards are based originally on the assumption that students will enroll full time, which requires 9 or more credits per academic term for graduate students. Thus, if students change their status from full- to part-time enrollment, an aid adjustment may result. Note that this can occur after a semester refund is sent out to the student. If a student withdraws from Temple University, an aid adjustment may also result. See the Conditions of Award section of the Policies page of the SFS website.

All resources, including scholarships, stipends, fellowships and the like, impact federal financial aid eligibility. Adjustments can be made throughout the aid year in the Fall, Spring and Summer terms.

Graduate students should contact the Office of Student Financial Services to confirm their enrollment, i.e., credit registration, each semester they do not enroll full time for 9 or more credits.

## Student Health Insurance

All full-time graduate students have the opportunity to enroll in one of Temple University's health insurance plans. Teaching Assistants, Research Assistants, Academic Interns and Graduate Externs receive health insurance benefits. Fellowship recipients have similar options. For questions regarding the plans, please visit the Student Health Insurance Plan webpage presented by Temple University Human Resources.

## University Support

Temple University provides financial support that includes assistantships, internships, externships and fellowships. Assistantships, internships and externships are awarded through departments and non-academic units based on need and fit. Interested applicants should consult with advisors or department chairpersons about the application procedures relevant to a desired position, as defined herewith:

- **Teaching Assistant:** Student engages in lecturing, instructing and supervising academic activities in the classroom, laboratory, studio, theater, or recitation or tutorial section; providing academic support in a laboratory, studio or office; or working in another setting in which academic instruction takes place. Expressly excluded are teaching of elementary or secondary students as part of community service projects and teaching that is not for university credit or is otherwise non-academic in nature, such as for recreational purposes.
- **Research Assistant:** Student engages in archival, clinical, field, laboratory, library, museum or survey research or in another research activity supervised by a faculty member or researcher on a sponsored project. Completion of the "RA Individual Declaration of Academic Benefit" form, found under Student Tools on TUportal within "University Forms" at bottom center, is required for the term of the award.
- **Academic Intern:** Student engages in academic, performance and professional activities that are central parts of the instructional program and directly related to the student's degree program (e.g., clinical practice, musical or theatrical production), but cannot be classified as either research or teaching. The activities must be

directly supervised by a faculty member/preceptor in the student's school or college.

- **Graduate Extern:** Student provides service that may entail academic and professional experience or development, although the activities are not directly supervised by a faculty member/preceptor in the student's degree program.

## Assistantships

Teaching Assistantships require the performance of instructional activity. Importantly, all graduate students who are assigned instructional responsibilities, where the language of instruction is English, must be certified as competent in spoken English. Consult your school or college dean's office for information on the SPEAK test process. As an alternative to teaching, Research Assistantships allow students to pursue research under the direction of a faculty member.

Assistantships, whether teaching or research, include both a stipend and tuition. To be considered for a Teaching or Research Assistantship, a student must have achieved a GPA of 3.25 or higher. In addition, the minimum GPA of 3.25 must be maintained throughout the duration of the assistantship.

## Internships and Externships

Temple University offers a variety of Academic Internships and Graduate Externships to a limited number of graduate students. Academic and administrative departments determine the selection process for these awards. To be considered for an internship or externship, a student must have achieved a GPA of 3.25 or higher. In addition, the minimum GPA of 3.25 must be maintained throughout the duration of the internship or externship.

Interested students should consult the department/program of their choice for specific details. Internships include support in the form of a stipend and tuition. Externships provide a stipend. Recipients of these awards are required to perform up to 20 hours of service per week.

## University-Wide Fellowships

Temple University offers a limited number of fellowships to support outstanding students in doctoral or Master of Fine Arts degree programs. Self-nomination is not permitted. Nominations for fellowships are submitted on one of the fellowship nomination forms by the department/program only. Competition for fellowship awards occurs annually in the month of February. Specific deadlines are found on the Graduate School calendar and on the forms.

Fellowships typically provide support, including a stipend and tuition, for four years, with shorter terms for those enrolled in a Master of Fine Arts degree program. The fellowship recipient is typically supported for two years with no service required or permitted. For the other two years, fellowship recipients are required to perform up to 20 hours of service per week as a Teaching Assistant or Research Assistant. Competition is for two classifications of fellowship:

- Presidential Fellowships are the most prestigious awards. Competition is reserved for only the most outstanding candidates.
- University Fellowships are awarded to outstanding incoming graduate students. These awards are intended to support students who demonstrate outstanding potential for success in their chosen fields.



To be considered as a nominee for a fellowship, applicants are urged to submit materials to the program of application by December 15.

## University Grants

Two highly competitive awards are designed to accelerate the degree completion process by offering significant financial support to promising students. These nonrenewable awards are intended to allow students to devote full-time work to completion of their final dissertation or creative project without the obstacle of additional employment. When application is made, applicants must acknowledge that, if selected as an award recipient, they become ineligible during both the period of award and beyond for any other funding from Temple University, including as a Teaching Assistant, Research Assistant, Academic Intern, Graduate Extern, student worker, adjunct faculty or non-tenure track faculty. Students apply in October for a Spring award or in March for a Summer or Fall award, if funding is available.

The application process requires a student application and a departmental nomination form as part of the submission packet. Access the forms by visiting TUportal. Click on the Tools tab and then scroll to the "University Forms" channel at bottom center.

## Doctoral Dissertation Completion Grant

Eligible students must be elevated to candidacy with the expectation of completing and defending their dissertation in the semester of application. Awardees of the Doctoral Dissertation Completion Grant receive a stipend, single coverage health insurance, and one credit of tuition remission.

## Master of Fine Arts Project Completion Grant

Eligible Master of Fine Arts students must be in the final semester of their program and complete the required project in the semester of application. Awardees of the Master of Fine Arts Project Completion Grant receive a stipend, single coverage health insurance, and one credit of tuition remission.

## First Summers Research Initiative and Other Summer Grants

The First Summers Research Initiative (FSRI) is a competition for summer research awards for domestic research doctoral students at Temple University who are traditionally underrepresented in their field of study. The purpose of these awards is to provide eligible students with funding to encourage their pursuit of research activity in the first, second and/or third summers of their graduate studies. The FSRI award is valued at \$6,000, if funding is available. Applicants can apply each summer until they achieve candidacy, although preference is given to first-time applicants.

Applicants for the FSRI award must meet the follow criteria:

1. Enrollment in a PhD program at Temple University in which the student is considered underrepresented in their field of study (i.e., as an ethnic minority), as determined by both National Science Foundation data and Temple demographics
2. U.S. citizenship
3. A minimum GPA of 3.5 at the time of the award
4. A formalized mentorship for the summer research experience with a faculty member at Temple University

5. Submission of a detailed plan for the mentored summer research experience prepared by the applicant and their faculty mentor, along with a cover letter from the mentor

The following criteria disqualify an applicant from garnering the award:

1. Receipt of financial aid from Temple University in the form of fellowship, assistantship, internship, or externship or employment as a student worker during the summer award period
2. Enrollment in coursework other than directed or independent research/study during the summer award period

FSRI and other summer grants are limited to students who have an academic year assistantship that does not include summer funding. Again, FSRI grants are limited to domestic research doctoral students who are traditionally underrepresented in their field of study. Other summer grants are open to research doctoral and Master of Fine Arts students whose assistantship does not otherwise include summer support.

# Graduate Student Services

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Numerous resources are available to graduate students at Temple University to enhance their educational and personal experiences. Chief among these are:

- Career Center
- Disability Resources and Services
- Military and Veteran Services Center
- Student Health and Wellness
- Student Success Center

## Career Center

<https://careercenter.temple.edu/>  
 220 Mitten Hall  
 1913 N. Broad Street  
 Philadelphia, PA 19122  
[careercenter@temple.edu](mailto:careercenter@temple.edu)  
 215-204-7981

Open Monday–Friday, 8:30 a.m.–5:00 p.m.

The Career Center at Temple University is a central resource that empowers students and alumni through comprehensive career development services. Every Temple graduate student can own their future through both in-person and online career services. Expert advice on preparing a resume, writing a cover letter, and networking is available. Graduate students can also meet with career coaches to receive the tools and guidance to explore their career options, build their professional brand, gain experience, and make their path for lifelong career success.

## Disability Resources and Services

<https://disabilityresources.temple.edu/>  
 Howard Gittis Student Center South  
 1755 N. 13th Street, Room 420  
 Philadelphia, PA 19122  
[drs@temple.edu](mailto:drs@temple.edu)  
 215-204-1280  
 Fax: 215-204-6794

Open Monday–Friday, 8:30 a.m.–5:00p.m.

Appointments should be made in advance with a staff member.

Temple University is committed to the full inclusion of students with a disability in all programs and services. The goal is to build a learning community wherein people with diverse abilities are valued and included in all facets of life at the University.

Disability Resources and Services (DRS), a free and confidential service, facilitates access and accommodations on an individualized basis and provides opportunities for students with a disability to grow and develop. Students who connect with DRS include those with physical, visual, hearing and speech disabilities; health, mental health and autism spectrum conditions; attention deficits; brain injuries; and learning disabilities. Many student veterans, student athletes, honors students and international students who have a disability connect with DRS.

Dedicated, knowledgeable DRS staff meet with graduate students to determine eligibility for accommodations and discuss strategies for educational success. DRS develops programs and workshops to support student retention and provides training and awareness about access and inclusion to the entire University community.

All graduate students in need of such services should contact DRS on Main Campus to register, although services are available at all Temple University campuses. Each campus has an identified DRS liaison to aid the graduate student in accessing these services:

- Academic accommodations, including:
  - Alternate format materials
  - Note-taking support
  - Sign language interpreters and CART services
  - Testing accommodations
- Accessible housing
- Assistive technology
- Career development
- Intake assessment
- Mentoring and leadership development opportunities
- Scholarships

## Military and Veteran Services Center

<https://veterans.temple.edu/>  
 601 Conwell Hall  
 1801 N. Broad Street  
 Philadelphia, PA 19122  
[mjsc@temple.edu](mailto:mjsc@temple.edu)  
 215-204-8387

A *covered individual* is any individual who is entitled to educational assistance under chapter 31, Vocational Rehabilitation and Employment, or chapter 33, Post-9/11 GI Bill® benefits.

Newly admitted or currently enrolled students seeking to use their veteran education benefits toward tuition and fees for the first time should begin by contacting the VA at 1-888-442-4551 or visit VA.GOV for eligibility information.

Prior to enrolling at Temple University, students using Tuition Assistance should discuss the educational plan with their Educational Services Officer (ESO) or the counselor within the military service.

The Military and Veteran Services Center (MVSC) serves as a centralized resource for prospective and currently enrolled military-affiliated students seeking guidance and assistance regarding admissions to Temple, GI Bill® benefits, Temple's certification process, access to support services, and event coordination. Additionally, the shared physical space serves as a dedicated space for student-veterans.

The primary mission of the Military and Veterans Services Center is to provide, facilitate or coordinate programs, events and services for military-affiliated students. Military-affiliated students are defined as student veterans, military service members and their family members (spouse and/or child).

## Priority Registration (PA Act 46)

Pennsylvania Act 46 of 2014 requires public institutions of higher education in Pennsylvania to provide veteran students, as defined in the Act, with preference in course scheduling. Active duty US

servicemembers and veterans are eligible to register on the first day of priority registration, regardless of the number of earned credits.

Non-compliance may be reported to the Pennsylvania Department of Education by submitting the Higher Education Student Complaint form found at [www.education.pa.gov](http://www.education.pa.gov).

Eligible students will receive an email with their priority registration date, time and a special registration PIN. Eligible students who are on Academic Warning or Probation must meet with an academic advisor prior to registration to have the PIN updated to allow registration on the first day of priority registration.

## Residency Status (PA Act 11)

Pennsylvania Act 11 mandates Temple University to charge the in-state tuition rate to out-of-state students living in Pennsylvania and using their GI Bill® benefits under chapters 30, 31, 33, 35 and sections 1606 and 1607. Eligible students will have their student account adjusted to reflect the in-state tuition rate. Temple will also review the financial aid package and make any necessary adjustments based on the in-state tuition rate.

**Note: GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government web site at <https://www.benefits.va.gov/gibill/>.**

## Veteran Education Benefit Certification Process

Servicemembers or veterans may enroll as full-time or part-time students; however, education benefits are based on enrollment status. For newly admitted students or first-time using education benefits, please follow these steps to declare benefit use via GIBenefits in TUportal:

1. Obtain the Certificate of Eligibility or eBenefits summary (one-time only).
2. Access GIBenefits in TUportal.
3. Submit Servicemember/Dependent information (one-time only).
4. Register for courses.
5. Declare to use your benefits for the registered term.
6. Upload your certificate of eligibility or eBenefits information (one-time only).

For students receiving Chapter 31/Vocational Rehabilitation benefits, Form VA-1905 will be sent to the Office of the University Registrar by the VA counselor in lieu of Certificate of Eligibility.

Information regarding additional services available for servicemembers and veterans can be found on the Military and Veteran Services Center website.

## Student Health and Wellness

### Student Health Fee

As part of the University Services Fee, all students are charged each term during the academic year to help subsidize the basic diagnostic and treatment services provided by healthcare providers at two campuses. Some services are not covered by the Student Health Fee, including, for example, dispensed medications, orthopedic supplies and immunizations. Extensive laboratory testing is available at Main Campus, but only office laboratory tests are performed at the Health Sciences Center campus.

## Student Health Services

<https://studenthealth.temple.edu/>

Main: 215-204-7500

1700 N. Broad Street, Fourth Floor

Philadelphia, PA 19121

Health Sciences Center (HSC): 215-707-4088

3340 N. Broad St., Suite 322

Philadelphia, PA 19140

StudentHealth@temple.edu

Mark Denys, Director

MDenys@temple.edu

215-204-7391

### Main

*Open* Monday–Tuesday, 8:30 a.m.–5:00 p.m.; Wednesday, 10:00 a.m.–5:00 p.m.; Thursday, 8:30 a.m.–5:00 p.m.; Friday, 8:00 a.m.–5:00 p.m.; Saturday, 10:00 a.m.–2:00 p.m.

*Closed* Sunday and daily between 11:15 a.m. and 12:15 p.m.

### HSC

*Open* Monday–Tuesday, 8:00 a.m.–4:30 p.m.; Wednesday, 10:00 a.m.–4:30 p.m.; Thursday–Friday, 8:00 a.m.–4:30 p.m.

*Closed* Saturday, Sunday and daily between 11:15 a.m. and 12:15 p.m.

Student Health Services strives to promote a high standard of health among all Temple University students through programs in preventive medicine and health education, in addition to diagnosis and treatment of injury and illness. Care providers include doctors, nurse practitioners and nurses. Services offered at the Main and Health Sciences Center campuses include basic medical care, an immunization/allergy injection clinic, family planning services, and a self-care center. Other services offered on Main Campus include nutritional consultation and HIV testing.

## Tuttleman Counseling Services

<https://counseling.temple.edu/>

1700 N. Broad Street, Second Floor

Philadelphia, PA 19121

215-204-7276

Open Monday–Friday, 8:00 a.m.–5:00 p.m.

Appointments are required except in emergency situations when immediate care is required.

Tuttleman Counseling Services (TCS) is a comprehensive provider of mental health services to Temple's student population. Services are free and confidential for all registered students. Our mission is to support and enhance the psychological functioning of our students and thereby support the academic mission of the University. It is recognized that our students are dealing with a variety of major life issues as they pursue their education, including affiliation, career choices, identity formation, relationships, and separation and individuation. In addition, some students come to us with prior mental health histories and medication needs.

TCS is first and foremost a provider of individual and group counseling services, although couple and family counseling are available at the student's request. This foundation provides students with support and guidance for a wide variety of problems, from adjustment issues and transitory difficulties to more serious psychological problems and even severe mental illness. Whenever possible, we seek to help students

avoid or reduce self-harm that may stem from making poor choices. TCS provides services in the following areas:

- Individual Therapy: <https://counseling.temple.edu/individual>
- Psychiatric Services: <https://counseling.temple.edu/psychiatric-services>
- Resiliency Resource Center: <https://counseling.temple.edu/resiliency-resource-center>

TCS also has specialized counselors who provide comprehensive services to students concerned with alcohol/substance use and/or other addictive behaviors; engage in crisis intervention, case management, counseling and advocacy work for Temple students who have experienced sexual assault, partner violence, childhood sexual abuse, sexual harassment and/or stalking; and offer specialized experience and interest in treating disordered eating and body image concern.

## Wellness Resource Center

<https://wellness.temple.edu/>  
201 Howard Gittis Student Center  
1755 N. 13th Street  
Philadelphia, PA 19122  
TUWellness@temple.edu  
215-204-8436

Open Monday–Friday, 8:30 a.m.–5:00 p.m.

The Wellness Resource Center is the on-campus health education and prevention office. Staffed by master's- and doctoral-level health professionals and supported by peer health educators, the Wellness Resource Center is committed to providing comprehensive wellness resources and services that empower Temple University students to make informed, healthier choices and achieve academic success. Center staff also work with faculty, staff and departments in training and consultation capacities to support them in addressing student health needs and concerns. The Wellness Resource Center's multifaceted model helps to create a collective consciousness of wellness on Temple's campus with the hope of producing students who are not only well-educated but also healthy. Training, consultation and programs on a variety of topics are offered, including alcohol and sex; alcohol and substance abuse; body image and nutrition; diversity; healthy relationships; HIV; LGBTQIA+; mental health; safer sex; self-esteem; sexual assault, rape and dating violence; sexuality: orientation, gender and identity; sexually transmitted infections; and stress/time management.

The Wellness Resource Center provides a safe space for students to receive free, anonymous or confidential health information in a supportive environment. Students are engaged in a variety of ways, including campus-wide wellness events, condom sales, course instruction, health programming, health-related referrals, HIV testing, individual health education sessions, peer education, and promotion of a healthier campus environment.

The Wellness Resource Center also offers students opportunities to get involved as peer educators and interns. These students receive comprehensive wellness training, preparing them to support campus-wide health and wellness initiatives. Students can receive academic credit for their work with the Wellness Resource Center. A limited number of paid positions are available to students who successfully complete SBS 2304 HEART Peer Educator Training (3 s.h.).

## Student Success Center

<https://studentsuccess.temple.edu/>  
230 Charles Library  
1900 N. 13th Street  
Philadelphia, PA 19122  
ssc@temple.edu  
215-204-0702

Open Monday–Thursday, 8:30 a.m.–8:30p.m.; Friday, 8:30 a.m.–4:30p.m.; Saturday, 10:00 a.m.–4:00 p.m.

The Student Success Center (SSC) offers a suite of services that are designed to meet the particular needs of graduate students. These services include both writing and research retreats, as well as writing and research groups, which provide support for students working on dissertations and theses. Also offered is the PhD Colloquium, a semester-long workshop focusing on writing articles for publication.

Graduate students may also utilize the following services and programs:

**Academic Coaching** is an appointment-based service that helps students develop effective learning habits and strategies, including skills related to studying, test taking, time management and more. Academic coaches meet one-on-one with students to help them hone specific skills related to the students' individual academic goals.

**Language Tutoring** provides assistance that aids students in achieving fluency in more than one language. This program gives students who are learning English an opportunity to meet one-on-one with a proficient speaker who can help them practice listening, speaking and reading comprehension, and who serves as a mentor related to issues of intercultural communication.

**The Writing Center** offers tutoring services that help graduate students develop as writers. Writing tutors work collaboratively with students on many aspects of their writing, including organization, argument, editing sentences for clarity and grammar, incorporating outside sources, and citation.

The SSC maintains an interactive website. Students can use the website to access online tutoring, to make appointments for services, and to access academic support resources, including videos and downloadable handouts.

# Schools and Colleges

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Tyler School of Art and Architecture (p. 37)

Fox School of Business and Management (p. 84)

Kornberg School of Dentistry (p. 160)

College of Education and Human Development (p. 185)

College of Engineering (p. 285)

Beasley School of Law (p. 329)

College of Liberal Arts (p. 356)

Lew Klein College of Media and Communication (p. 436)

Lewis Katz School of Medicine (p. 454)

Center for the Performing and Cinematic Arts

    Boyer College of Music and Dance (p. 473)

    School of Theater, Film and Media Arts (p. 707)

School of Pharmacy (p. 729)

School of Podiatric Medicine (p. 784)

College of Public Health (p. 787)

College of Science and Technology (p. 880)

School of Sport, Tourism and Hospitality Management (p. 944)

## Tyler School of Art and Architecture

Tyler School of Art and Architecture has a preeminent reputation among institutions of higher education chiefly as a result of the collective record of achievement produced by its graduates. Tyler graduate programs are intended for students whose work has achieved strong definition and who seek continued growth and education in their discipline. Internationally recognized graduate faculty bring a reputation for excellence in academic research, studio practice and teaching with a broad range of attitudes and philosophic positions. The educational atmosphere at Tyler is characterized by a system of mentorship that encourages diversity, respect for individual direction, and a rigorous exchange of ideas and creative challenges.

The philosophy on which Tyler School of Art and Architecture was founded has contributed to the school's success. Since 1935, Tyler has grown from a small art school in suburban Elkins Park, PA, to encompass a wide range of programs on the Main Campus of Temple University. Stella Elkins Tyler, the donor of the estate on which the art school was founded, had a keen interest in progressive education and a deep appreciation for her mentor: Boris Blai, sculptor, who was appointed the founding dean of the school. It was her expressed wish that the estate become an environment for the advancement of the fine arts, scholarly study in the arts, and individual creativity.

In 2016, the Departments of Landscape Architecture and Horticulture and of Planning and Community Development, which previously resided in the School of Environmental Design, were merged with Tyler's Department of Architecture to form a Division of Architecture and Environmental Design. In 2019, the division was reorganized as the Department of Architecture and Environmental Design:

- The department offers the Master of Architecture, a first professional degree program at the graduate level accredited by the National Architecture Accrediting Board. The programs in architecture engage the city, exploring and addressing the ethical, ecological and social dimensions of architecture and the urban environment, with the mission of preparing leaders in architectural practice.
- With regard to landscape architecture and horticulture, the department can trace its origins to the Pennsylvania School of Horticulture for Women, founded in 1911 at Ambler Campus. The Master of Landscape Architecture (MLArch) degree has been offered since Fall 2010. Through an ecological approach to planning, design, development and care of the land, the programs in landscape architecture and horticulture promote the development of skills to improve the quality of urban, suburban and rural communities.
- In the field of planning and community development, students are prepared to be skilled practitioners for the dynamic and growing fields of community development and community and regional planning. Accredited by the Planning Accreditation Board, the Master of Science in City and Regional Planning enables students to lead efforts to create and maintain healthy, sustainable communities by providing a broad-based understanding and awareness of multi-dimensional aspects of urban, suburban and rural community challenges and the means of effecting change from both grass-roots and public policy perspectives.

On July 1, 2019, the school officially adopted the Tyler School of Art and Architecture as its name and was reorganized into six departments:

- Department of Architecture and Environmental Design
- Department of Art
- Department of Art Education and Community Arts Practices
- Department of Art History
- Department of Foundations
- Department of Graphic and Interactive Design

Tyler School of Art and Architecture constitutes a major facet in a comprehensive set of arts and architecture programs at Temple University. The mission is to educate, motivate and inspire individuals who enter society as artists, architects, art historians, designers and educators with the highest aspirations for achievement, producing innovative work that is publicly presented and critically considered. The school's location in the Northeast Corridor not only makes the extensive art collections and institutions of Philadelphia, New York City, and Washington, D.C. easily accessible, but also allows for opportunities to complement Tyler's faculty with an extensive program of visiting artists, critics and scholars drawn from these cultural centers.

A Tyler education distinguishes its students as individuals who are well prepared for the unprecedented opportunities available today in the fields of architecture, art and design.

## Graduate Programs and Certificates

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- Architecture MS (p. 43)
- Art Education MEd (p. 46)
- Art History MA (p. 48)
- Art History PhD (p. 51)
- Ceramics MFA (p. 54)
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## Graduate Faculty

*Mariola Alvarez*, Assistant Professor, Department of Art History, Tyler School of Art and Architecture; PhD, University of California.

*Philip P. Betancourt*, Professor Emeritus, Department of Art History, Tyler School of Art and Architecture; PhD, University of Pennsylvania.

*Gerard F. Brown*, Associate Professor, Department of Art, Tyler School of Art and Architecture; MA, School of the Art Institute of Chicago.

*Douglas J. Bucci*, Assistant Professor, Department of Art, Tyler School of Art and Architecture; MFA, Temple University.

*Susan E. Cahan*, Professor, Department of Art History, Tyler School of Art and Architecture; PhD, Graduate Center, City University of New York.

*Tracy E. Cooper*, Professor, Department of Art History, Tyler School of Art and Architecture; PhD, Princeton University.

*Chad D. Curtis*, Associate Professor, Department of Art, Tyler School of Art and Architecture; MFA, Alfred University, New York State College of Ceramics.

*Therese A. Dolan*, Professor Emerita, Department of Art History, Tyler School of Art and Architecture; PhD, Bryn Mawr College.

*Müge Durusu-Tanrıöver*, Assistant Professor, Department of Art History, Tyler School of Art and Architecture; PhD, Brown University.

*Sasha Eisenman*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; PhD, Rutgers University.

*Amze J. Emmons*, Associate Professor, Department of Art, Tyler School of Art and Architecture; MFA, University of Washington.

*Jane DeRose Evans*, Professor, Department of Art History, Tyler School of Art and Architecture; PhD, University of Pennsylvania.

*Clifton R. Fordham*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MArch, Yale University.

*Mark T. Gibson*, Assistant Professor, Department of Art, Tyler School of Art and Architecture; MFA, Yale University.

*Philip Glahn*, Associate Professor, Department of Art, Tyler School of Art and Architecture; PhD, City University of New York.

*Abby Ryan Guido*, Assistant Professor, Department of Graphic and Interactive Design, Tyler School of Art and Architecture; MBA, Temple University.

*Marcia B. Hall*, Laura H. Carnell Professor, Department of Art History, Tyler School of Art and Architecture; PhD, Harvard University.

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*Jesse Harrod*, Associate Professor, Department of Art, Tyler School of Art and Architecture; MFA, School of the Art Institute of Chicago.

*Nathan Heavers*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MLA, University of Pennsylvania.

*David Herman Jr.*, Assistant Professor, Department of Art Education and Community Arts Practices, Tyler School of Art and Architecture; PhD, University of North Texas.

*Kelly A. Holohan*, Professor, Department of Graphic and Interactive Design, Tyler School of Art and Architecture; MFA, Temple University.

*Richard D. Hricko*, Professor Emeritus, Department of Art, Tyler School of Art and Architecture; MFA, University of Iowa.

*Pauline Hurley-Kurtz*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MLA, University of Pennsylvania.

*Renee E. Jackson*, Assistant Professor, Department of Art Education and Community Arts Practices, Tyler School of Art and Architecture; PhD, Concordia University.

*Gabriel Kaprielian*, Assistant Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MArch, University of California Berkeley.

*Lisa Kay*, Associate Professor, Department of Art Education and Community Arts Practices, Tyler School of Art and Architecture; EdD, Northern Illinois University.

*Nichola Kinch*, Associate Professor, Department of Foundations, Tyler School of Art and Architecture; MFA, Temple University.

*Robert T. Kuper*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MLA, Auburn University.

*Baldev S. Lamba*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MLA, University of Pennsylvania.

*Scott R. Laserow*, Professor, Department of Graphic and Interactive Design, Tyler School of Art and Architecture; BFA, Temple University.

*Roberto Lugo*, Assistant Professor, Department of Art, Tyler School of Art and Architecture; MFA, The Pennsylvania State University.

*Dermot MacCormack*, Professor, Department of Graphic and Interactive Design, Tyler School of Art and Architecture; BFA, National College of Art and Design, Dublin.

*Lynn A. Mandarano*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; PhD, University of Pennsylvania.

*Pablo Meninato*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; PhD, Universidade Federal do Rio Grande do Sul.

*Rebecca Michaels*, Associate Professor of Instruction, Department of Art, Tyler School of Art and Architecture; MFA, Temple University.

*Leah Modigliani*, Associate Professor, Department of Art History, Tyler School of Art and Architecture; PhD, State University of New York at Stony Brook.

*Dona R. Nelson*, Professor, Department of Art, Tyler School of Art and Architecture; BFA, The Ohio State University.

*Jeffrey Nesbit*, Assistant Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; DDes, Harvard University, Graduate School of Design.

*Emily Neumeier*, Assistant Professor, Department of Art History, Tyler School of Art and Architecture; PhD, University of Pennsylvania.

*Rachel Grace Newman*, Assistant Professor, Department of Art History, Tyler School of Art and Architecture; PhD, Stanford University.

*Sharyn A. O'Mara*, Associate Professor, Department of Art, Tyler School of Art and Architecture; MFA, Rhode Island School of Design.

*Odili Donald Odita*, Professor, Department of Art, Tyler School of Art and Architecture; MFA, Bennington College.

*Karyn Olivier*, Professor, Department of Art, Tyler School of Art and Architecture; MFA, Cranbrook Academy of Art.

*Michael Olszewski*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; PhD, University of Delaware.

*Pepón Osorio*, Laura H. Carnell Professor, Department of Art Education and Community Arts Practices, Tyler School of Art and Architecture; MA, Columbia University.

*Alpesh Patel*, Associate Professor, Department of Art History, Tyler School of Art and Architecture; PhD, University of Manchester.

*Erin Pauwels*, Assistant Professor, Department of Art History, Tyler School of Art and Architecture; PhD, Indiana University, Bloomington.

*Bryan Martin Satalino*, Associate Professor of Instruction, Department of Graphic and Interactive Design, Tyler School of Art and Architecture; MFA, Temple University.

*Paul E. Sheriff*, Professor, Department of Graphic and Interactive Design, Tyler School of Art and Architecture; BFA, Temple University.

*Mark Shetabi*, Associate Professor, Department of Art, Tyler School of Art and Architecture; MFA, Pennsylvania Academy of the Fine Arts.

*Robert Z. Shuman Jr.*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; BArch, Temple University.

*Gerald D. Silk*, Professor Emeritus, Department of Art History, Tyler School of Art and Architecture; PhD, University of Virginia.

*Samantha Simpson*, Associate Professor, Department of Foundations, Tyler School of Art and Architecture; MFA, San Francisco Art Institute.

*Hester Stinnett*, Professor, Department of Art, Tyler School of Art and Architecture; MFA, Temple University.

*Alexandra Strada*, Assistant Professor, Department of Art, Tyler School of Art and Architecture; MFA, Columbia University.

*Kim D. Strommen*, Professor, Department of Foundations, Tyler School of Art and Architecture; MFA, Washington University.

*Lolly Tai*, Professor Emerita, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; PhD, Heriot-Watt University, Edinburgh College of Art.

*Christian Tomaszewski*, Assistant Professor, Department of Art, Tyler School of Art and Architecture; MFA, Academy of Fine Arts in Poznan, Poland.

*Ulysses Sean Vance III*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MArch, North Carolina State University.

*Jessica Vaughn*, Associate Professor, Department of Art, Tyler School of Art and Architecture; MFA, University of Pennsylvania.

*Ashley West*, Associate Professor, Department of Art History, Tyler School of Art and Architecture; PhD, University of Pennsylvania.

*M. Katherine Wingert-Playdon*, Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MS, The Pennsylvania State University.

*Andrew Wit*, Associate Professor, Department of Architecture and Environmental Design, Tyler School of Art and Architecture; MArch, Massachusetts Institute of Technology.

*Byron Wolfe*, Professor, Department of Art, Tyler School of Art and Architecture; MFA, Arizona State University.

*William Yalowitz*, Associate Professor, Department of Art Education and Community Arts Practices, Tyler School of Art and Architecture; EdD, Temple University.

## Architecture MArch

### TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Architecture.

### About the Program

The Master of Architecture (MArch) program is a first professional degree preparing students for the practice of architecture through a rigorous course of study that engages students with urgent urban, architectural, environmental and sociocultural issues. The curriculum is centered on design studios that require the synthesis and application of knowledge from other coursework. Seminars in building technology, history/theory, professional practice and research address questions in tandem with design studios. Elective courses allow students to pursue specializations with focus and intent. Together, the architecture courses satisfy professional accreditation requirements. During the final year of study, students have the opportunity to pursue a self-directed research and design thesis. The Department of Architecture and Environmental Design offers three tracks for the MArch: a 1-year, 2-year, or 3-year program depending on a student's educational background upon entry to the degree.

- The 1-year track is a +1 accelerated undergraduate-graduate program that enables eligible students to complete the 60-credit MArch degree within 15 months after receiving Temple's Bachelor of Science in Architecture (BSArch) pre-professional degree. Eligible undergraduate students use up to 12 specified graduate credits to fulfill requirements for their undergraduate degree. Upon graduation from their undergraduate program, students move seamlessly into their graduate program. At the end of the contiguous fifth year, students receive a Master of Architecture degree. To be eligible for the program, students must be declared as an Architecture major; have a minimum of 3.25 cumulative GPA in at least 45 credits of coursework taken at Temple; be able to complete their undergraduate degree in four full-time terms (beginning with their first term taking a graduate course as an undergraduate); and be able to complete the graduate degree in one additional year, including the two summer terms of graduate coursework.
- The 2-year track is a 60-credit degree program for students who earn Temple University's Bachelor of Science in Architecture (BSArch) degree and for students from other four-year pre-professional degree programs with equivalent course content.



- The 3-year track provides a curriculum of up to 90 credits for students without a pre-professional degree in architecture. The first year of this program provides a rigorous introduction to architectural design that consists of up to 30 credits of pre-professional studies, including building technology courses, design studios, and history and theory seminars. Each student's prior academic record is evaluated to determine program and course placement. The number of credits students need to take varies depending on the amount of pre-professional architectural course content previously satisfied by the candidate. Students who have little or no architectural content at the undergraduate level are required to take the full 30 credits of pre-professional studies in architecture. Students who have degrees in architectural studies may receive advanced standing within the 3-year track.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The curriculum is designed for a full-time load of 15 credits per term. Students are, however, able to complete the degree program on a part-time basis.

**Study Abroad:** MArch students in the Professional Track may choose to study at the TU Rome or TU Japan campuses in the Spring terms. Other study abroad exchange programs may allow students to study in the Fall.

**Accreditation:** The MArch degree program is accredited by the National Architectural Accrediting Board (NAAB), which requires publication of the following statement:

In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year term, an eight-year term with conditions, or a two-year term of continuing accreditation, or a three-year term of initial accreditation, depending on the extent of its conformance with established education standards. Doctor of Architecture and Master of Architecture degree programs may require a pre-professional undergraduate degree in architecture for admission. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Temple University's Department of Architecture and Environmental Design offers the following NAAB-accredited degree programs:

- MArch (BSArch pre-professional degree + 60 graduate credits)
- MArch (baccalaureate degree + up to 90 graduate credits)

The latest accreditation visit for all programs was in 2022.

For more information on NAAB accreditation and reporting requirements, please visit Tyler's NAAB Professional Program Information page.

**Job Prospects:** The Master of Architecture is an accredited professional degree program that prepares students for a career as a professional architect. Because this is an urban program located centrally in Philadelphia, engagement with the local professional community is a primary characteristic of the program. During their time in the program,

students are provided with many opportunities to engage with members of the profession through design critiques and mentorship initiatives.

**Licensure/Certification:** Licensure from a U.S. jurisdiction is required to practice Architecture in the United States. Licensure for architects is state regulated and must be obtained through achievement of three necessary components: (a) education, (b) professional practice experience, and (c) examination requirements. All states require the Architect Registration Examination® (ARE®). In addition, a majority of states require a degree that is accredited by the National Architectural Accrediting Board (NAAB) and the Architectural Experience Program® (AXP®), which is administered by the National Council of Architectural Registration Boards (NCARB).

Temple University's Master of Architecture is accredited by NAAB. NAAB-accredited degrees meet the education requirement for registration with all 55 U.S. licensing boards which, along with obtaining the necessary and documented experience of the AXP® and passing the ARE®, qualifies a candidate for licensure.

Although required in 38 jurisdictions, graduating from a NAAB-accredited program is not required in all states. States that allow an alternative educational path for licensure typically require a longer period of professional experience and/or a preliminary examination prior to taking the ARE®. Candidates who have obtained a NAAB-accredited professional degree typically complete their licensure requirements in a shorter time frame and constitute, by far, the majority of successful candidates in the United States. The following jurisdictions require a professional degree from a NAAB-accredited program: Alabama, Alaska, Arkansas, Connecticut (some conditions apply), Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, West Virginia, Wyoming, as well as Puerto Rico, the Virgin Islands, and Washington, D.C.

Temple University's Master of Architecture program also prepares students for the AXP®, which students can begin while enrolled in Temple University's undergraduate and graduate architecture programs. The process connects students with NCARB representatives and is overseen by a faculty mentor. Successful completion of both the NAAB degree and the AXP® is required to qualify for the licensing exam in most states and territories. Additional hours or years of experience may be required beyond the AXP®.

Additional requirements (such as exams, questionnaires or specialized training) may be required depending on the state in which one intends to become licensed. For more information, visit <https://www.ncarb.org/get-licensed/licensing-requirements-tool>.

**Non-Matriculated Student Policy:** Non-matriculated students must contact the Department of Architecture and Environmental Design for information. A maximum of 9 graduate credits can be taken at Temple University prior to applying to the program.

**Financing Opportunities:** The Department of Architecture and Environmental Design has a limited number of scholarships for graduate students. Students should also check the Tyler School of Art and Architecture and Student Financial Services websites for financial aid opportunities. Students should complete a FAFSA application to determine eligibility for student financial aid, work study employment

within the Department of Architecture and Environmental Design, or other eligible on-campus jobs.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

*Spring:* November 1

Applications are reviewed as they are received after the deadline. Applicants must meet the January 6 priority deadline to be considered for financial assistance. After January 6, applications may be considered on a rolling basis.

Students are normally admitted in the Fall term. In the instance when students are admitted in the Spring, they may have limited course offerings in the first term because course sequencing begins in the Fall. See the Tyler School of Art and Architecture website for the most up-to-date application information.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members and/or professionals in the field who are familiar with the applicant's academic and professional competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** The MArch program has three tracks:

1. a +1 accelerated track,
2. a two-year 60-credit track, and
3. a three-year track, up to 90 credits.

The +1 accelerated track is open to qualified students in the Temple BSArch program. Admission into the two-year track is open only to students who have completed a pre-professional degree in Architecture, i.e., either the Temple BS in Architecture program or a program with course content equivalent to the current Temple University BS in Architecture. Admission into the three-year track is open to any student who has completed a bachelor's degree.

All applicants apply directly to the MArch program, not to a specific curricular track. Admitted students are placed in the appropriate track based on a thorough review of all application materials.

**Bachelor's Degree in Discipline/Related Discipline:** A pre-professional baccalaureate degree in Architecture (or equivalent) is required for the two-year Professional Track. A baccalaureate degree in any discipline is required for the three-year Intensive Design Track. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your reason for pursuing a degree in Architecture, your interest in Temple's program in particular, and your aspirations and future career goals.

### Standardized Test Scores:

GRE: Due to testing limitations related to COVID-19, the Tyler School of Art and Architecture is temporarily waiving submission of GRE scores for applicants to the MArch in Architecture degree program. Applicants may still voluntarily submit GRE test scores, but scores will only be used as a supplement to required application materials. All other admission requirements, including submission of scores for a standardized test of English, if applicable, still need to be met. In some circumstances, the Graduate Admissions Committee may request additional supplemental application materials or an interview as part of the admissions process.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** All applicants must submit a portfolio of their most important and representative design, creative and written work. Portfolios from students with prior academic experience in Architecture should include architectural design work done in academic settings. Portfolios may also include work in the visual arts or in visual communication. In addition, work completed in practice may be included but should clearly articulate the applicant's role in the project. Papers, research or other materials (preferably dealing with the built environment) are invited as evidence of scholarly, academic or creative work. Work chosen for inclusion in a portfolio should best represent the applicant's knowledge, aptitudes, interests, creative ability and experience relative to the discipline of Architecture. The portfolio should include approximately 20 images or other items.

Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed on the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** The Architecture Admissions Committee recommends the awarding of graduate transfer credits on a case-by-case basis as applications are reviewed. The maximum number of graduate transfer credits a student may receive is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 60 for the Professional Track; up to 90 for the Intensive Design Track

*Required Courses:*

### Professional Track <sup>1,2</sup>

Year 1		Credit Hours
Fall		
ARCH 5252	Str Des for Architects 1	3
ARCH 5351	Env Control Systems 1	3
ARCH 8011	Advanced Architecture Design Studio 1	6

ARCH 8131	Arch Research Seminar 1	3
<b>Credit Hours</b>		<b>15</b>
<b>Spring</b>		
ARCH 5253	Str Des for Architects 2	3
ARCH 8013	Comprehensive Architecture Design Studio	6
ARCH 8352	Environmental Control Systems 2	3
Select one from the following: <sup>3</sup>		3
ARCH 8132	Arch Research Seminar 2	
ARCH 8133	Arch Research Seminar 3	
<b>Credit Hours</b>		<b>15</b>
<b>Year 2</b>		
<b>Fall</b>		
ARCH 8012	Elect Arch Des Studio	6
ARCH 9991	Directed Research ((OR ARCH Elective))	3
ARCH Elective		3
Free Elective		3
<b>Credit Hours</b>		<b>15</b>
<b>Spring</b>		
ARCH 8012	Elect Arch Des Studio	6
or	or Architecture Design Thesis	
ARCH 9991		
ARCH 8096	Professional Practice	3
ARCH Elective		3
Free Elective		3
<b>Credit Hours</b>		<b>15</b>
<b>Total Credit Hours</b>		<b>60</b>

1

ROME, TOKYO, and STUDY ABROAD OPTION: MArch students in the Professional Track may elect to study abroad in the Spring term at the Temple Rome or Temple Japan campus. Some study abroad exchange programs allow students to study in the Fall semester.

2

Studio course credits count toward ARCH 8012. Architecture seminar course credits count toward Architecture elective requirements. Other coursework counts toward free elective credits in the program. Consult with your faculty and academic advisor.

3

ARCH 8132 and ARCH 8133 are typically offered during the Fall and Spring terms. Consult with your faculty and academic advisor.

## Intensive Design Track

Up to 30 credits are taken in Year 1, with the actual number varying according to the amount of architecture pre-professional course content previously satisfied by the student. Students are required to keep a portfolio of coursework taken in Year 1. Upon successful completion of Year 1, students undergo a portfolio review prior to entering the 2-year Professional Track. Courses for the Intensive Design Track include:

Code	Title	Credit Hours
<b>Core Courses</b>		
ARCH 5011	Graduate Representation Intensive 1	3
ARCH 5012	Graduate Representation Intensive 2	3
ARCH 5122	Graduate Design Foundation Intensive <sup>1</sup>	6

ARCH 5231	Graduate Design Studio 1	6
ARCH 5232	Graduate Design Studio 2	6
<b>Building Technology</b>		
ARCH 5152	Materials and Methods of Construction	3
ARCH 5251	Structural Analysis for Architects	3
<b>History and Theory<sup>2</sup></b>		
ARCH 5141	Architectural History 1: Ancient through Renaissance	3
ARCH 5142	Architectural History 2: Renaissance through 20th Century	3
ARCH 5296	Movements in Modern Architecture	3
ARCH 5596	Seminar in Architectural Theory	3
<b>Total Credit Hours</b>		<b>42</b>

1

ARCH 5122 is required of students who took fewer than 8 credits of foundation or architectural design studios as undergraduates.

2

The four courses (12 credits) identified include two courses (6 credits) that may be taken in Years 2 and 3 as architecture electives.

### Culminating Events:

#### *Design Studio Project:*

In the Intensive Design Track, students are required to take up to 18 credits of design studio and 6 credits of representation courses. Placement is assessed at the time of application and is based on the student's portfolio and transcript.

In the Professional Track, students are required to complete four design studios or three design studios and a thesis.

#### *Design Thesis:*

Students can undertake an independent design thesis. This option is a two-term, two-course sequence: ARCH 9991 in the Fall, and ARCH 9996 in the Spring. The result is a pre-design position paper and design project analysis, culminating in a design thesis project presentation and written/graphic documentation of the work.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/architecture-march-ta-arch-marc>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

## Submission Address for Portfolio:

<https://temple.slideroom.com/>

## Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

## Department Contacts:

*Architecture Graduate Curricular Head:*

Pablo Meninato  
205 Architecture Building  
pablo.meninato@temple.edu  
610-659-9428

*Department Chairperson:*

Sasha W. Eisenman  
201 Dixon Hall  
eisenman@temple.edu  
267-468-8168

# Architecture MS

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Science in Architecture.

## About the Program

The Master of Science in Architecture is a post-professional degree for those who have already earned a Bachelor of Architecture or a Master of Architecture professional degree. Offering the post-professional MS in Architecture provides an opportunity for prospective students to enhance professional skills and gain additional knowledge. While the professional degree programs in architecture focus on the design, technological and professional skills needed to practice architecture, the profession of architecture touches all areas and scales of the built environment. Architectural practices can specialize in such areas as education, healthcare, housing or residential design, preservation, tall buildings and infrastructure, and urban design, to name a few. Opportunities for practice also require different skill sets and advanced knowledge in business, design-build or digital technologies.

In addition to a general studies in architectural design track, the Architecture MS degree program offers three concentrations:

- The concentration in Advanced Technologies and Design broadens students' knowledge of digital and material technologies.
- The concentration in Health and Design expands students' knowledge of healthcare design.
- The concentration in Urban Ecologies and Design widens students' knowledge of design, sustainability and urban ecology.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** In addition to a general studies in architectural design track, students may choose a concentration in:

- Advanced Technologies and Design
- Health and Design
- Urban Ecologies and Design

**Job Prospects:** The post-professional Master of Science in Architecture offers working architects and those seeking advancement in the field the opportunity to build professional skills and design toolsets to elevate their practice competency. Graduates are also prepared to teach architectural design and to practice in other arenas such as government agencies.

**Non-Matriculated Student Policy:** Non-matriculated students must contact the Department of Architecture and Environmental Design for information. A maximum of 9 graduate credits can be taken at Temple University prior to applying to the program.

**Financing Opportunities:** The Department of Architecture and Environmental Design has a limited number of scholarships for graduate students. Students should also check the Tyler School of Art and Architecture and Student Financial Services websites for financial aid opportunities. Students should complete a FAFSA application to determine eligibility for student financial aid, work study employment within the Department of Architecture and Environmental Design, or other eligible on-campus jobs.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

*Spring:* November 1

Applications are reviewed as they are received after the deadline. Applicants must meet the January 6 priority deadline to be considered for financial assistance. After January 6, applications may be considered on a rolling basis.

Students are normally admitted in the Fall term. In the instance when students are admitted in the Spring, they may have limited course offerings in the first term because course sequencing begins in the Fall. See the Tyler School of Art and Architecture website for the most up-to-date application information.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members and/or professionals in the field who are familiar with the applicant's academic and professional competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Master's Degree in Discipline/Related Discipline:** A Master of Architecture degree is applicable, but is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. Applicants are expected to hold a Bachelor of Architecture or a Master of Architecture degree. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program, educational and research goals, future career goals, and academic and research achievements.

#### Standardized Test Scores:

GRE: Due to testing limitations related to COVID-19, the Tyler School of Art and Architecture is temporarily waiving submission of GRE scores for applicants to the MS in Architecture degree program. Applicants may still voluntarily submit GRE test scores, but scores will only be used as a supplement to required application materials. All other admission requirements, including submission of scores for a standardized test of English, if applicable, still need to be met. In some circumstances, the Graduate Admissions Committee may request additional supplemental application materials or an interview as part of the admissions process.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** All applicants must submit work samples of their most important and representative academic and/or professional work. Work samples are to be submitted in portfolio format and must include architectural design projects and can include other creative work. Work samples from applicants who have been in a professional setting for a period of six years or more can include student work, but the applicant should instead emphasize work done in a professional setting and clearly articulate the applicant's role in the project. Papers, research or other materials (preferably dealing with the built environment) are invited as evidence of scholarly, academic or creative work. As much as possible, work samples should best represent the applicant's knowledge, aptitudes, interests, creative ability and experience relative to the program. As a guideline, the applicant should include approximately 20 images or other items.

Work samples are to be uploaded at <https://temple.slideroom.com>, as instructed on the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** The Architecture Admissions Committee recommends the awarding of graduate transfer credits on a case-by-case basis as applications are reviewed. The maximum number of graduate transfer credits a student may receive is 9.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 30, whether or not a concentration is pursued

*Required Courses:*

## MS with No Area of Concentration

Code	Title	Credit Hours
<b>Architecture Research Seminar</b>		
Select one from the following:		3
ARCH 8131	Arch Research Seminar 1	
ARCH 8132	Arch Research Seminar 2	
ARCH 8133	Arch Research Seminar 3	
ARCH 8134	Architecture Research Seminar 4 - Urban Innovations: Technology, Environment and Health in Society	
<b>Current Topics Courses</b>		
Select three from the following: <sup>1</sup>		3
ARCH 5132	Current Topics in Health Facilities Planning and Design	
ARCH 5133	Current Topics in Healthy Communities and Design	
ARCH 5134	Current Topics in Resilience and Design	
ARCH 5135	Current Topics in Energy and Performance	
ARCH 5136	Current Topics in Fabrication and Making	
ARCH 5137	Current Topics in Visualization	
ARCH 5138	Current Topics in Materials and Design	
<b>Architecture Design Studio</b>		
Select one from the following:		6
ARCH 8012	Elect Arch Des Studio	
ARCH 8013	Comprehensive Architecture Design Studio	
ARCH 8014	Architectural Design for Health	
ARCH 8015	Urban Ecologies and Design	
ARCH 8016	Advanced Technologies and Design	
<b>Architecture Electives <sup>2</sup></b>		<b>9</b>
<b>Research Courses</b>		
ARCH 9991	Directed Research <sup>3</sup>	3
ARCH 9996	Architecture Design Thesis <sup>4</sup>	6
<b>Total Credit Hours</b>		<b>30</b>

1

Multiple sections with different speakers are offered throughout the year. Course numbers may be taken more than once.

2

Electives are selected in consultation with an advisor.

3

If a design thesis is not pursued, the student may, with the permission of an advisor, select a second architecture research seminar or elective course to fulfill this requirement.

4

If a design thesis is not pursued, the student may, with the permission of an advisor, select a second architecture design studio course to fulfill this requirement.

## OR MS with Optional Concentration in Advanced Technologies and Design

Code	Title	Credit Hours
<b>Core Courses</b>		
ARCH 8016	Advanced Technologies and Design	6
ARCH 8133	Arch Research Seminar 3	3
<b>Current Topics Courses</b>		
Select three from the following: <sup>1</sup>		3
ARCH 5132	Current Topics in Health Facilities Planning and Design	
ARCH 5133	Current Topics in Healthy Communities and Design	
ARCH 5134	Current Topics in Resilience and Design	
ARCH 5135	Current Topics in Energy and Performance	
ARCH 5136	Current Topics in Fabrication and Making	
ARCH 5137	Current Topics in Visualization	
ARCH 5138	Current Topics in Materials and Design	
<b>Architecture Elective</b>		<b>3</b>
<b>Concentration Electives</b> <sup>2</sup>		<b>6</b>
<b>Research Courses</b>		
ARCH 9991	Directed Research	3
ARCH 9996	Architecture Design Thesis	6
<b>Total Credit Hours</b>		<b>30</b>

1

Multiple sections with different speakers are offered throughout the year. Course numbers may be taken more than once.

2

Electives are selected in consultation with an advisor from Tyler courses, particularly ARTU or GAD, or from courses in other Temple programs.

## OR MS with Optional Concentration in Health and Design

Code	Title	Credit Hours
<b>Core Courses</b>		
ARCH 8014	Architectural Design for Health	6
ARCH 8134	Architecture Research Seminar 4 - Urban Innovations: Technology, Environment and Health in Society	3
<b>Current Topics Courses</b>		
Select three from the following: <sup>1</sup>		3
ARCH 5132	Current Topics in Health Facilities Planning and Design	
ARCH 5133	Current Topics in Healthy Communities and Design	
ARCH 5134	Current Topics in Resilience and Design	
ARCH 5135	Current Topics in Energy and Performance	
ARCH 5136	Current Topics in Fabrication and Making	
ARCH 5137	Current Topics in Visualization	
ARCH 5138	Current Topics in Materials and Design	
<b>Architecture Elective</b>		<b>3</b>
Select one from the following:		3

ARCH 5013	Facilities for Health Workshop 1
ARCH 5014	Facilities for Health Workshop 2
ARCH 5131	Form and Function in Health and Environments

### Concentration Electives

Select two from the following: <sup>2</sup> 6

HIM 5101	Fundamentals of Health Informatics
HIM 5111	Technology for Healthcare Financial Management
HIM 5128	Health Data: Standards and Interoperability
HPM 5014	Leadership and Management in Non-Profit Organizations
HPM 5122	Healthcare Quality and Safety
SBS 5001	Fundamentals of Public Health

### Research Courses

ARCH 9991	Directed Research	3
ARCH 9996	Architecture Design Thesis	6

**Total Credit Hours** **30**

1

Multiple sections with different speakers are offered throughout the year. Course numbers may be taken more than once.

2

Alternate elective(s) may be selected with the approval of an advisor.

## OR MS with Optional Concentration in Urban Ecologies and Design

Code	Title	Credit Hours
<b>Core Courses</b>		
ARCH 8015	Urban Ecologies and Design	6
ARCH 8131	Arch Research Seminar 1	3
<b>Current Topics Courses</b>		
Select three from the following: <sup>1</sup>		3
ARCH 5132	Current Topics in Health Facilities Planning and Design	
ARCH 5133	Current Topics in Healthy Communities and Design	
ARCH 5134	Current Topics in Resilience and Design	
ARCH 5135	Current Topics in Energy and Performance	
ARCH 5136	Current Topics in Fabrication and Making	
ARCH 5137	Current Topics in Visualization	
ARCH 5138	Current Topics in Materials and Design	
<b>Architecture Elective</b>		<b>3</b>
<b>Concentration Electives</b> <sup>2</sup>		<b>6</b>
<b>Research Courses</b>		
ARCH 9991	Directed Research	3
ARCH 9996	Architecture Design Thesis	6
<b>Total Credit Hours</b>		<b>30</b>

1

Multiple sections with different speakers are offered throughout the year. Course numbers may be taken more than once.

2

Electives are selected in consultation with an advisor from Tyler's CTRP and LARC courses or from courses in other Temple programs.

#### **Culminating Event:**

##### *Design Thesis:*

Students undertake an independent design thesis. This requires completion of a two-term, two-course sequence: ARCH 9991 in the Fall, and ARCH 9996 in the Spring. The result is a pre-design position paper and design project analysis, culminating in a design thesis project presentation and written/graphic documentation of the work.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/architecture-ms-ta-arch-ms>

### **Department Information:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### **Mailing Address for Official Transcripts:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### **Submission Address for Portfolio:**

<https://temple.slideroom.com/>

### **Submission Address for All Other Application Materials:**

<https://apply.temple.edu/Tyler/>

### **Department Contacts:**

#### *Architecture Graduate Curricular Head:*

Pablo Meninato  
205 Architecture Building  
pablo.meninato@temple.edu  
610-659-9428

#### *Department Chairperson:*

Sasha W. Eisenman  
201 Dixon Hall  
eisenman@temple.edu  
267-468-8168

## **Art Education MEd**

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Education in Art Education.

## **About the Program**

The Master of Education (MEd) with a Major in Art Education at the Tyler School of Art and Architecture is a NASAD-accredited program with an option for students to pursue Pennsylvania certification in art, grades Kindergarten through 12. The program offers a pathway for K-12 teachers who want to hone a specialization in art or anyone who wants to add art teaching credentials.

The program gives students access to the resources of both a world-class art school and Temple University, a large public research university. Students develop their understanding of a broad range of art learners and expand their repertoire of teaching strategies. Grounded in both research and the studio, a Tyler MEd gives students the training needed to teach art at the K-12 level and cultivate arts practices beyond formal educational institutions.

Tyler students take full advantage of the school's location in Philadelphia and the city's rich array of schools, communities, museums, galleries and artists, opening up opportunities for artistic growth, research, networking and jobs. The Tyler faculty is committed to urban art education and the power of collaborating with communities. Tyler students not only learn how to teach art and grow as artists, but they also learn how to effect positive change in the communities where they work.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** Students are encouraged to engage in in-depth study in a specific studio area.

**Job Prospects:** The program is primarily dedicated to producing well-trained art teachers.

**Licensure/Certification:** Teacher certification is the process used in the United States to ensure that prospective K-12 teachers are qualified and prepared to teach at the levels and in the subjects that they intend to teach. Certification in Art Education prepares graduates to teach art to students from K-12. Certification is not always required by private institutions, but some may prefer to hire certified teachers.

In order to become certified in Art Education, students must complete a bachelor's degree from a regionally accredited institution of higher education, pass the *Praxis*® exams required in their state of employment, and satisfy other state-licensing examinations, as applicable.

Temple University is a Pennsylvania state-approved teacher preparation program for K-12 Art. See <https://www.education.pa.gov/Educators/Certification/BecomeAnEducator/Pages/ACPSpecialty.aspx>. Completion of Temple University's Master of Education in Art Education with Teaching Certification satisfies the necessary requirements for graduates to sit for the *Praxis*® Core Academic Skills for Educators, *Praxis*® Subject Assessments, and *Praxis*® Fundamentals.

For certification in some states, students may need to take the *Praxis*® Principles of Learning and Teaching (PLT) exam for their desired grade levels, which they are prepared for through their field placements,

classroom observations, and study of human development and pedagogy.

**Non-Matriculated Student Policy:** Only certain courses are available to non-matriculated graduate students. Please contact the Department of Art Education and Community Arts Practices for more information.

**Financing Opportunities:** In addition to federal student aid, graduate assistantships are available on a competitive basis to support Tyler MEd students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

*Spring:* November 1

All applications are evaluated together after deadline date. Applicants must meet the January 6 priority deadline to be considered for financial assistance. After January 6, applications may be considered on a rolling basis.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty, art teachers or supervisors, and curators or gallery directors familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** Applicants must have an undergraduate degree, 40 undergraduate studio credits, and 9 art history credits.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Art or Art Education is required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program in particular, future career goals, and academic and artistic endeavors and achievements.

### Standardized Test Scores:

GRE: Scores should be in the 50th percentile or higher on the verbal and/or analytical sections. Students with concerns about scores should contact the Chair of the Department of Art Education and Community Arts Practices.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** Applicants must submit a portfolio that consists of 20 images representative of their range of experience and the immediate direction of their work. Include a variety of drawings. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the Art Education Program Director, the student's advisor, and the Associate Dean, up to 9 credits of graduate work completed at Temple University within a five-year period may be transferred into the program. Up to 6 credits of graduate coursework taken at other accredited institutions within the prior five years before matriculation may be considered for transfer into the program after the student has enrolled. No decisions are made until a student has successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 33, or 51 with Teaching Certification

### Required Courses:

Code	Title	Credit Hours
<b>Art Education or Education Component</b>		
ARTE 8001	Contemporary Issues in Art Education	3
ARTE 8002	History of Art Education	3
ARTE 8003	Art Education Research	3
	One additional course <sup>1</sup>	3
<b>Art History Component</b>		
	Select two courses from a range of graduate offerings (courses 5000-5580 or 8000-8570)	6
<b>Studio Art Component</b>		
	Select five studio courses <sup>2</sup>	15
<b>Total Credit Hours</b>		<b>33</b>

1

One additional course can be taken in Art Education, Education or any of the Liberal Arts programs offered by the University, provided it complements a particular research interest and receives prior advisor approval.

2

Select five courses from Tyler's extensive studio course listing. Since in-depth studies are encouraged, students may take as many as three courses (9 credits) in one studio area. Courses are available both in Art and in Graphic Arts and Design.

### Teaching Certification <sup>1</sup>

MEd candidates may pursue Teaching Certification concurrently with their graduate studies. An additional 18 credits of coursework is required in Art Education and Educational Psychology coursework:



Code	Title	Credit Hours
ARTE 5003	Inclusive Art Education K-12 Students in the Art Room	3
ARTE 5888	Student Teaching	6
ARTE 9187	Graduate Materials and Methods in Art	3
EDUC 5402	Child and Adol Develop	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Total Credit Hours</b>		<b>18</b>

1

The MEd with Teaching Certification program of 51 credits, along with successful completion of the state-required *Praxis*® Fundamental Subjects: Content Knowledge exam and *Praxis*® Art: Content Knowledge exam, fulfills all of the requirements for Pennsylvania State Certification in Art for Kindergarten through grade 12. Pennsylvania Teaching Certification is awarded to U.S. citizens only.

**Internship:** An internship is required if seeking Teaching Certification.

#### Culminating Events:

##### *Artwork Review:*

At the end of the final term's residence, the student is required to pass a graduate review of artwork conducted by a committee of Art Education and Studio Art faculty.

##### *Thesis:*

In lieu of a comprehensive examination, MEd students produce a thesis, which is a scholarly master's paper developed through research under the guidance of an advisor. Students can complete the scholarly requirement as they pursue required coursework. The scholarly work results from the accumulation of what is learned rather than as an additional course requirement. Students who need additional time to complete the scholarly requirement, however, can register for ARTE 9995 Master's Thesis Research & Writing (1 s.h.) each term until they finish their research and produce their paper.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/art-education-med-ta-arte-med>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for Portfolio:

<https://temple.slideroom.com/>

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

#### *Graduate Program Director:*

Dr. Renee Jackson  
renee.jackson@temple.edu  
215-777-9258

#### *Department Chairperson - Art Education and Community Arts Practices:*

Dr. Lisa Kay  
lisa.kay@temple.edu  
215-777-9264

## Art History MA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Arts in Art History.

### About the Program

The Tyler School of Art and Architecture at Temple University offers a gateway to the best PhD programs in the discipline for students seeking careers in higher education or research. Alternately, it is a stand-alone option for students seeking positions in museums, galleries, nonprofits and other institutions.

The MA in Art History offers an optional concentration in Arts Management, which provides a specialized degree pathway for students seeking to advance artists, art and audiences by becoming cultural organizers and leaders. Students learn to engage the forces that shape the visual arts landscape by aligning their operations and programs with their mission and values. In addition to Art History requirements, core courses in the Arts Management track build professional practice skills, awareness of the history of the field, and perspectives on its future across a range of institutional models.

A number of resources are available at Temple to Art History MA students:

- The Loretta C. Duckworth Scholars Studio in Charles Library offers opportunities for research in the digital humanities with high-end computing and visualization resources, a virtual reality studio, collaboration spaces, and 3-D printing and media-capture capabilities.
- Temple Contemporary, Tyler's innovative exhibitions and public programs space, offers opportunities to learn curatorial practice.
- Expansive, world-class art and architecture buildings provide direct access to all aspects of the creative process via fellow students and faculty artists and designers.
- State-of-the-art digital resources include 8,000 digital images and access to millions more via Tyler's Artstor Digital Library membership.
- Tyler's art history community is enriched by a steady stream of compelling lectures by leading scholars and practitioners.

Tyler graduate students in Art History may participate in Temple University's Teaching in Higher Education certificate program to gain advanced training for a career in higher education or in the Cultural Analytics graduate certificate program offered by Duckworth Scholars Studio.

**Time Limit for Degree Completion:** 3 years, although the degree is designed to be completed full-time in two years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Study Abroad:** Many Tyler Art History graduate students take advantage of research opportunities at Temple University Rome and Temple's Japan Campus in Tokyo, both among the oldest and largest facilities of their type. Other opportunities exist elsewhere around the globe as guided by faculty members' extensive connections.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Non-Matriculated Student Policy:** Non-matriculated students must contact the Graduate Director for information.

**Financing Opportunities:** In keeping with Temple University's commitment to access and affordability, Tyler's graduate programs offer a competitive level of tuition with some opportunities for financial support. Rates are set annually and are affected by many factors, including in-state or out-of-state residency. For more information, contact the Graduate Director or the Associate Graduate Director for Arts Management, as applicable, and explore Temple's graduate student financial information page. Eligible graduate students are encouraged to apply for work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

*Spring:* November 1

Students wishing to be considered for awards are strongly encouraged to apply by December 15.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic and artistic competence. The letters should be submitted by the referee at the time of application at <https://apply.temple.edu/Tyler/>.

**Coursework Required for Admission Consideration:** Five courses in Art History are desired for admissions consideration: two general surveys and one upper-level course in each of three periods, in any geographical area: ancient art (to circa 1400), art produced circa 1400-1800, and Modern/Contemporary art. Official transcripts from all universities/colleges attended, whether or not a degree was awarded and whether the courses were taken as an undergraduate or graduate student, must be sent as part of the online application.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, but it need not be in Art History. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent as part of the online application.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's program, research goals, future career goals, academic and research achievements, and how you will contribute to the Tyler School of Art and Architecture mission. Submit at <https://apply.temple.edu/Tyler/>.

### Standardized Test Scores:

GRE: Due to testing limitations related to COVID-19, the Tyler School of Art and Architecture is temporarily waiving submission of GRE scores for applicants to the MA and PhD Art History programs. Applicants may still voluntarily submit GRE test scores, but scores will only be used as a supplement to required application materials. All other admission requirements, including submission of scores for a standardized test of English, if applicable, still need to be met. In some circumstances, the Graduate Admissions Committee may request additional supplemental application materials or an interview as part of the admissions process.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current curriculum vitae required. Submit at <https://apply.temple.edu/Tyler/>.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper on a topic in Art History. The paper or excerpt submitted should be no more than 10 pages in length and fully referenced according to a professional, scholarly style manual. Submit at <https://apply.temple.edu/Tyler/>.

**Transfer Credit:** The Graduate School allows the transfer of a maximum of 6 credits taken within a five-year period before matriculation for credit toward the master's degree. These credits must be in Art History, at the graduate level, with at least a final grade of "B," and must not have been used as part of the fulfillment of requirements for another degree awarded to the student.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30, or 36 if the optional concentration in Arts Management is pursued

*Required Courses:*

### MA with a Focus on Research

Code	Title	Credit Hours
<b>Core Course</b>		
ARTH 5601	Historiography of Art History <sup>1</sup>	3
<b>Electives <sup>2</sup></b>		12
<b>Art History Distribution Courses</b>		

In at least three distribution areas, select a total of four courses from the following:

Earliest to 1400		
ARTH 5510	Topics in Ancient Art	
ARTH 5520	Topics in Medieval Art	
ARTH 5621	Archeological Program	
ARTH 8610	Seminar in Ancient Art	
ARTH 8620	Seminar in Medieval Art	
ARTH 9183	Archaeological Program	
1400-1800		
ARTH 5530	Topics in Renaissance Art	
ARTH 5540	Topics in Early Modern Art	
ARTH 5630	Topics in Renaissance Art II	
ARTH 8630	Problems in Renaissance Art	
ARTH 8635	Problems in Northern Renaissance Art	
ARTH 8640	Seminar in Global Baroque Art	
1800-Present		
ARTH 5097	Graduate Design: Graduate Design Theory	
ARTH 5350	Topics in Arts Administration	
ARTH 5351	Introduction to Arts Management Practice: Mission, Values and Community	
ARTH 5370	Topics in Contemporary Art	
ARTH 5403	History of Modern Crafts and Design	
ARTH 5405	History of Photography	
ARTH 5460	Topics in Contemporary Art	
ARTH 5550	Topics in 19th-Century Art	
ARTH 5560	Topics in 20th-Century Art	
ARTH 5660	Topics in Modern and Contemporary Art	
ARTH 5665	Modern and Contemporary Art in Latin America	
ARTH 5670	Topics in Contemporary Art	
ARTH 8401	Text + Image: Framing the Modern Illustrated Book	
ARTH 8402	Introduction to Critical Thinking and Practice	
ARTH 8460	Seminar in Contemporary Art	
ARTH 8470	Seminar in Modern Art	
ARTH 8475	Seminar in 19th-Century Art	
ARTH 8480	Seminar in Early Modern Art	
ARTH 8500	Seminar in Arts Management	
ARTH 8560	Seminar in Modern and Contemporary Art	
ARTH 8660	Seminar in 20th-Century Art	
ARTH 8665	Seminar in 21st-Century Art	
ARTH 8872	Arts Management Capstone	
Transhistorical		
ARTH 5408	The History of Printmaking and Print Culture	
Research Course		
ARTH 9995	Research for Qualifying Paper	3
<b>Total Credit Hours</b>		<b>30</b>

1

Upon admission to the MA program, students are expected to complete ARTH 5601 during their first Fall term.

2

With approval from the Graduate Director, 6 credits of electives may be taken outside of Art History.

## OR MA with Optional Concentration in Arts Management

Code	Title	Credit Hours
<b>Core Courses</b>		
ARTH 5351	Introduction to Arts Management Practice: Mission, Values and Community	3
ARTH 5601	Historiography of Art History <sup>1</sup>	3
<b>Art History Electives</b>		<b>9</b>
<b>Open Electives</b>		<b>12</b>
<b>Culminating Courses</b>		
ARTH 8872	Arts Management Capstone	3
ARTH 9585	Internship Seminar	3
ARTH 9586	Internship Seminar	3
<b>Total Credit Hours</b>		<b>36</b>

1

Upon admission to the MA program, students are expected to complete ARTH 5601 during their first Fall term.

**Language Examination:** All MA students must demonstrate a reading knowledge of one foreign language.

### Culminating Events:

#### Qualifying Paper:

For the research-focused master's degree, students enroll in ARTH 9995. The qualifying paper engages the student in acquiring an understanding of how to conduct research using primary and secondary sources; a knowledge of art history that is rooted in historical, cultural, stylistic and ethical analysis; and the skills to write critical evaluations of artwork in their historical, cultural and stylistic contexts.

Selection of the research project requires the approval of the student's primary advisor, who is chosen by the end of a student's first year of study. The primary advisor guides the student in writing the qualifying paper, which is to be 25-30 pages in length. The qualifying paper entails rethinking, elaboration and expansion of a research project already composed for a class, with the addition of concentrated research time and/or a different methodological framework to extend the scope of the paper, producing a product that contains original work. The qualifying paper requires the approval of two readers.

#### Internship:

The Arts Management concentration requires 6 credits of internship supervised by the Arts Management Concentration Advisor. Three of these credits are taken in the second academic term of study, and three credits are taken in the last academic term concurrent with the required capstone class.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/art-history-ma-ta-art-ma>

## Admissions Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

## Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

## Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

## Department Contacts:

*Associate Graduate Director for Arts Management:*

John Hatfield  
210G Art History Suite, Tyler Building  
john.hatfield@temple.edu

*Graduate Director:*

Mariola Alvarez  
210M Art History Suite, Tyler Building  
mariola.alvarez@temple.edu  
215-777-9172

*Department Chairperson:*

Jane DeRose Evans  
jevans@temple.edu  
215-777-9738

## Art History PhD

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Doctor of Philosophy in Art History.

## About the Program

The PhD in Art History program at the Tyler School of Art and Architecture provides the broad-based training needed for teaching, research and curatorial positions at the highest levels of the discipline. Offering both the resources of one of the nation's top art schools and a large research university, Tyler PhD students work with faculty members who have expertise in diverse and global areas, including new digital technologies. Students take full advantage of faculty contacts and the extraordinary variety of research opportunities opened by Tyler's location in Philadelphia, a vibrant center of art, culture and history strategically situated near New York and Washington, D.C.

The Department of Art History offers a doctoral program for students with an MA degree, as well as for exceptionally well-prepared students with a BA, who may be admitted directly without first earning a master's degree. A strong art history background, appropriate languages and indicators of high achievement are requisites for students entering with a BA only. Upon entering the program, all students are assigned a primary advisor and are expected to work closely with the advisor during their

studies. Students may change primary advisors in accordance with Graduate School procedures.

A number of resources are available at Temple to Art History PhD students:

- The Loretta C. Duckworth Scholars Studio in Charles Library offers opportunities for research in the digital humanities with high-end computing and visualization resources, a virtual reality studio, collaboration spaces, and 3-D printing and media-capture capabilities.
- Temple Contemporary, Tyler's innovative exhibitions and public programs space, offers opportunities to learn curatorial practice.
- Expansive world-class art and architecture buildings provide direct access to all aspects of the creative process via fellow students and faculty artists and designers.
- State-of-the-art digital resources include 8,000 digital images and access to millions more via Tyler's Artstor Digital Library membership.
- Tyler's art history community is enriched by a steady stream of compelling lectures by leading scholars and practitioners.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Study Abroad:** Many Tyler Art History graduate students take advantage of research opportunities at Temple University Rome, among the oldest and largest facilities of its type, and elsewhere around the globe, as guided by faculty members' extensive connections. Students researching Italian topics may be eligible for a fellowship to study in Rome.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** The curriculum concentrates on Western art history, broadly conceived, including ancient, the Black Atlantic, early modern, Europe, Islamic, Latin America, and modern and contemporary in the United States. Curricula are informed by the historiography and critical theory of art history. Tyler graduate students in Art History may participate in Temple University's Teaching in Higher Education certificate program to gain advanced training for a career in higher education or in the Cultural Analytics graduate certificate program offered by Duckworth Scholars Studio.

**Non-Matriculated Student Policy:** Non-matriculated students must contact the Graduate Director for information.

**Financing Opportunities:** Exceptionally qualified students who apply for the PhD may be nominated by the Department of Art History for prestigious University Fellowships upon receipt of their complete application.

The Department also offers Teaching/Research Assistantships and one Academic Internship. Applicants interested in being considered for these awards must submit their application by December 15. Assistantships carry a stipend, health insurance, and full tuition remission for up to 9 credits per term.

Eligible graduate students are encouraged to apply for work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: December 15

Spring: November 1

Applicants should declare an intention to enter the program by establishing contact with the Graduate Director in the Department of Art History. They are also encouraged to establish contact with at least one faculty member whose area of research interest overlaps with their own and who could potentially serve as their faculty advisor. Information on the faculty can be found at <https://tyler.temple.edu/programs/art-history>.

Applicants who wish to be considered for a University Fellowship must apply by December 15. Those who would like to be considered for a Teaching Assistantship are also strongly encouraged to apply by December 15, but November 1 applications for Spring admission may be considered.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators who can speak to the applicant's academic and art historical competence. The letters should be submitted by the referee at the time of application at <https://apply.temple.edu/Tyler/>.

**Coursework Required for Admission Consideration:** Five courses in Art History are desired for admissions consideration: two general surveys and one upper-level course in each of three periods, in any geographical area: ancient art (to circa 1400), art produced circa 1400-1800, and Modern/Contemporary art. Official transcripts from all universities/colleges attended, whether or not a degree was awarded and whether the courses were taken as an undergraduate or a graduate student, must be sent as part of the online application.

**Master's Degree in the Discipline/Related Discipline:** Generally, a master's degree in Art History is required, but a background in Art History and a master's degree in a related field suffice. Alternatively, exceptionally well-prepared students with a BA may be admitted directly to the PhD program.

**Bachelor's Degree in the Discipline/Related Discipline:** A baccalaureate degree is required, but it need not be in Art History.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's program, research goals, future career goals, academic and research achievements, and how you will contribute to the Tyler School of Art and Architecture mission. Submit at <https://apply.temple.edu/Tyler/>.

### Standardized Test Scores:

GRE: Due to testing limitations related to COVID-19, the Tyler School of Art and Architecture is temporarily waiving submission of GRE scores for applicants to the MA and PhD Art History programs. Applicants may still voluntarily submit GRE test scores, but scores will only be used as a supplement to required application materials. All other admission requirements, including submission of scores for a standardized test of English, if applicable, still need to be met. In some circumstances, the

Graduate Admissions Committee may request additional supplemental application materials or an interview as part of the admissions process.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current curriculum vitae required. Submit at <https://apply.temple.edu/Tyler/>.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper on a topic in Art History. The paper or excerpt submitted should be no more than 10 pages in length and be fully referenced according to a professional, scholarly style manual. Submit at <https://apply.temple.edu/Tyler/>.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Master's: 30

Number of Credits Required Beyond the Baccalaureate: 60

Required Courses:

### PhD for Students Entering with a Master's Degree <sup>1</sup>

Year 1		Credit Hours
<b>Fall</b>		
ARTH 5601	Historiography of Art History <sup>2</sup>	3
Electives <sup>3</sup>		6
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
Electives <sup>3</sup>		9
<b>Credit Hours</b>		<b>9</b>
Year 2		
<b>Fall</b>		
Electives <sup>3</sup>		9
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
ARTH 9994	Preliminary Examination Preparation <sup>4</sup>	1
<b>Credit Hours</b>		<b>1</b>
Year 3		
<b>Fall</b>		
Select one from the following:		1
ARTH 9998 Pre-Dissertation Research <sup>4</sup>		
ARTH 9999 Dissertation Research <sup>4,5</sup>		
<b>Credit Hours</b>		<b>1</b>

<b>Spring</b>		
ARTH 9999	Dissertation Research <sup>4,5</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Prior to registering for any course, students are expected to consult with their primary advisor and/or the Graduate Director.

2

If they have not taken a comparable class at the master's level, students must register for ARTH 5601.

3

Electives must be taken at the 5000 level or higher. With approval from the primary advisor and Graduate Director, up to 9 credits of electives may be taken outside of Art History.

4

Enrolling in 1 credit of ARTH 9994, ARTH 9998 or ARTH 9999 grants a PhD student full-time status.

5

Students may only register for ARTH 9999 after the dissertation proposal has been accepted by the Graduate Faculty and the student has advanced to candidacy. Additionally, a minimum of 2 credits of ARTH 9999 are required to earn the degree.

## PhD for Students Entering with a Baccalaureate Degree<sup>1</sup>

<b>Year 1</b>		
<b>Fall</b>		<b>Credit Hours</b>
ARTH 5601	Historiography of Art History <sup>2</sup>	3
Electives <sup>3</sup>		6
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
Electives <sup>3</sup>		9
<b>Credit Hours</b>		<b>9</b>
<b>Year 2</b>		
<b>Fall</b>		
Electives <sup>3</sup>		9
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
ARTH 9891	Directed Research <sup>4</sup>	3
Electives <sup>3</sup>		6
<b>Credit Hours</b>		<b>9</b>
<b>Year 3</b>		
<b>Fall</b>		
Electives <sup>3</sup>		9
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
ARTH 9994	Preliminary Examination Preparation <sup>5</sup>	6
<b>Credit Hours</b>		<b>6</b>

<b>Year 4</b>		
<b>Fall</b>		
ARTH 9998	Pre-Dissertation Research <sup>5,6</sup>	3
<b>Credit Hours</b>		<b>3</b>
<b>Spring</b>		
ARTH 9999	Dissertation Research <sup>5,7</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Year 5</b>		
<b>Fall</b>		
ARTH 9999	Dissertation Research <sup>5,7</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Spring</b>		
ARTH 9999	Dissertation Research <sup>5,7</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Year 6</b>		
<b>Fall</b>		
ARTH 9999	Dissertation Research <sup>5,7</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Spring</b>		
ARTH 9999	Dissertation Research <sup>5,7</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Year 7</b>		
<b>Fall</b>		
ARTH 9999	Dissertation Research <sup>5,7</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Total Credit Hours</b>		<b>60</b>

1

Prior to registering for any course, students are expected to consult with their primary advisor and/or the Graduate Director.

2

Upon admission to the PhD program, students are required to complete ARTH 5601 in their first Fall term.

3

Electives must be taken at the 5000 level or higher. With approval from the primary advisor and Graduate Director, up to 9 credits of electives may be taken outside of Art History.

4

In ARTH 9891, students write their Qualifying Paper, which the Department reviews and must approve prior to formally accepting the student into the PhD program.

5

The number of credits shown in this grid for ARTH 9994, ARTH 9998 and ARTH 9999 are recommended, but can be adjusted to fit a student's schedule and timeline for dissertation research. Ultimately, 15 credits of ARTH 9994, ARTH 9998 and ARTH 9999 are required to complete the degree, including a minimum of 2 credits of ARTH 9999. Enrolling in 1 credit of ARTH 9994, ARTH 9998 or ARTH 9999 in an academic term grants a PhD student full-time status.

6

In ARTH 9998, students write their dissertation proposal.

7

Students may only register for ARTH 9999 after the dissertation proposal has been accepted by the Graduate Faculty and the student has advanced to candidacy.

**Language Examination:** Students must demonstrate a reading knowledge of two foreign languages necessary to complete research in the given field. The language examinations are taken with the permission of the student's primary advisor.

**Culminating Events:**

*Qualifying Paper:*

The qualifying paper is only required of those entering the program with a bachelor's degree on the direct track. At the end of the fourth term of coursework, these students are required to submit a qualifying paper to demonstrate their command of scholarly research and writing. The ability to continue in the PhD program is contingent on the quality of this paper. If the qualifying paper is not deemed acceptable, the student is transferred to the MA program and works with an advisor to determine the progress made toward completion of the master's degree. When any outstanding courses are successfully completed, the student is awarded the MA.

*Doctoral Examinations:*

The purpose of the doctoral examinations is to demonstrate critical knowledge of current research and historiography in the student's primary field of interest. The examinations consist of two written exams, one in the student's broad field and one in the specialized field, and an accompanying oral examination. See Graduate School Policy 02.27.11.

*Dissertation Proposal:*

The dissertation proposal, which must be approved by the Department's Graduate Faculty, demonstrates the student's knowledge of and ability to conduct the proposed research. The dissertation proposal may only be submitted after the student has successfully completed their doctoral examinations. After the proposal has been accepted by the Department's Graduate Faculty, the student is raised to candidacy. See Graduate School Policy 02.28.12.

*Dissertation:*

The doctoral dissertation is an extended written study that shows evidence of the candidate's original thought and research and their mastery of the scholarly method. The dissertation makes a contribution to the field of Art History. With the consent of the primary advisor and members of the dissertation defense committee, the student presents an oral defense of the dissertation. The goal of the dissertation is to have a manuscript that is publishable in a scholarly venue. See Graduate School Policy 02.28.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/art-history-phd-ta-art-phd>

### Admissions Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu

215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

*Graduate Director:*

Mariola Alvarez  
210M Art History Suite, Tyler Building  
mariola.alvarez@temple.edu  
215-777-9172

*Department Chairperson:*

Jane DeRose Evans  
jevans@temple.edu  
215-777-9738

## Ceramics MFA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Ceramics.

### About the Program

The Ceramics program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree that offers personal mentorship from faculty and visionary visiting artists in state-of-the-art facilities and encourages experimentation with media, interdisciplinary projects and public art to ignite social change.

The Ceramics program fosters mastery of the discipline through access to internationally recognized faculty, state-of-the-art facilities, and Philadelphia's rich clay culture, resulting in work that challenges the medium's traditional boundaries. The close-knit Ceramics MFA community is connected to the extended Tyler MFA cohort through interdisciplinary mentorship from a faculty of socially conscious artists, technologists, designers and art historians. The Ceramics faculty engage one-on-one with students to develop individual direction and encourage the exchange of ideas—in the studio and across Philadelphia—supported by the resources of Temple, a large public research university.

As members of the region's preeminent Ceramics program, Tyler MFA students partner with organizations in Philadelphia, a city with an established clay tradition and a thriving contemporary art scene, as well as other major cultural centers nearby, including New York. Philadelphia also offers opportunities for students to join a thriving arts and culture community and work as practicing artists and professionals.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** Through a studio-based approach complemented by art history classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world. Tyler's rigorous program empowers students to engage deeply and develop a holistic practice with supportive research and interdisciplinary exploration.

**Study Abroad:** Tyler MFA students may pursue study abroad opportunities at Temple's Japan Campus and Temple University Rome to expand their studies in a global context.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** In the Ceramics program, equipment is available for wheel work, mold-making and slip-casting projects, and digital fabrication. Large kilns are available for hand building and sculpture. Students are expected to demonstrate both conceptual and technical excellence in the area, as well as a profound interest in research and experimentation.

**Job Prospects:** The MFA program prepares graduates for careers as professional artists, craftspersons, designers and educators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/> Tyler/, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** 40 undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and portfolio in Ceramics are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the

exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the Art Department Chairperson and the Vice Dean, up to 9 credits of graduate work may be transferred into the MFA program as Art History or Studio electives. Only credits received within five years of the transfer request are eligible. No decisions are made concerning transfer credits until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 60

*Required Courses:*

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8101/8102	Graduate Projects: Ceramics I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses</b> <sup>2</sup>		<b>9</b>
<b>Electives</b> <sup>3</sup>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.



3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

#### **Culminating Event:**

##### *Thesis Exhibition:*

An approved thesis exhibition, with a written statement of working philosophy and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. The thesis exhibition should be the fruit of the two years' studio research and practice in which the student engaged. The student defends their thesis exhibition to the review committee. The committee then evaluates the exhibition as pass with distinction, pass or fail.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/ceramics-mfa-ta-crme-mfa>

### **Department Information:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tylerart@temple.edu  
215-777-9090

### **Mailing Address for Official Transcripts:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### **Submission Address for Portfolio:**

<https://temple.slideroom.com/>

### **Submission Address for All Other Application Materials:**

<https://apply.temple.edu/Tyler/>

### **Department Contacts:**

*Ceramics MFA Program Director:*  
Lauren Sandler  
lauren.sandler@temple.edu  
215-777-9201

*Art Department Chairperson:*  
Byron Wolfe  
byron.wolfe@temple.edu

215-777-9244

# **City and Regional Planning MS**

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Science in City and Regional Planning.

## **About the Program**

The MS in City and Regional Planning is the terminal degree for the planning profession. The primary purpose of the program is to develop skilled practitioners for dynamic career opportunities in the government, nonprofit and private sectors. The program's areas of strength are in sustainability, environmental planning and community engagement. The program provides a broad-based understanding and awareness of the physical and economic aspects of planning, sensitivity to the social and environmental impact of planning decisions, and a knowledge of governmental structures as they apply to planning.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program is designed for full-time study, allowing students to complete the program in two years. Students may elect, however, to complete the program on a part-time basis.

**Affiliation(s):** The Department of Architecture and Environmental Design is a member of the American Planning Association (APA) and Association of Collegiate Schools of Planning (ACSP).

**Study Abroad:** The department has a formal agreement with Beijing Forestry University, where study abroad is possible.

**Accreditation:** The MS program in City and Regional Planning is accredited by the Planning Accreditation Board (PAB). The PAB accredits university programs in North America leading to bachelor's and master's degrees in planning. The accreditation process is based on standards approved by the PAB with input from the public and our sponsoring organizations: the American Planning Association (APA); the American Institute of Certified Planners (AICP), which is the professional planners' institute within the American Planning Association; and the Association of Collegiate Schools of Planning (ACSP).

**Areas of Specialization:** Two optional concentrations are available to students in the MS in City and Regional Planning degree program:

- Sustainable Community Planning
- Transportation Planning

Graduate certificates in Sustainable Community Planning (p. 79) and Transportation Planning (p. 80) are available to non-matriculated students and students in other Temple University graduate programs, with the approval of their graduate advisor. For more information, see the certificate descriptions on the Department of Architecture and Environmental Design website.

**Job Prospects:** A graduate degree in city planning is recognized by the profession as the terminal degree. The majority of students graduating from the program find employment in the greater Philadelphia region, Commonwealth of Pennsylvania, and beyond. The majority of the program's graduates have found employment in planning or a related field within one year of graduation. Private, public and nonprofit

employment opportunities in planning are strong for graduate degree holders based on current need and projected growth over the next decade.

**Licensure/Certification:** The American Institute of Certified Planners (AICP) provides nationwide, independent verification of planners' qualifications. While not required to practice, AICP certification ensures academic qualifications, work experience, mastery of essential skills, and commitment to a professional code of ethics. As a Planning Accreditation Board (PAB) accredited program, Temple University's Master of Science in City and Regional Planning provides the fastest path to AICP certification, with two years' professional planning experience required. To be eligible for the certification exam, graduates must also be a current member of the American Planning Association (APA) and be engaged in professional planning, either currently or in the past, as defined by AICP. For more information, visit <https://www.planning.org/certification/eligible/>.

New Jersey offers its own license for professional planners. This is in addition to, not instead of, the national AICP. Graduates who plan on working in New Jersey can opt to sit for the Professional Planner (PP) exam. Details can be found at <https://njplanning.org/professional-development/exam-prep/pp-pit/>.

**Non-Matriculated Student Policy:** Non-matriculated students are permitted to take a maximum of 9 graduate credits at Temple University prior to applying to the program. Please contact the Department of Architecture and Environmental Design for details.

**Financing Opportunities:** The Department of Architecture and Environmental Design has a limited number of scholarships for graduate students. Students should also check the Tyler School of Art and Architecture and Student Financial Services websites for financial aid opportunities. Students should complete a FAFSA application to determine eligibility for student financial aid, work-study employment within the department, or other on-campus jobs.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

*Spring:* November 1

Applications are reviewed as they are received up through the priority deadline. Applications received after these dates may be considered for admission. See the Tyler School of Art and Architecture website for the most up-to-date application information.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, planning professionals and others in a position to evaluate the applicant's past work and/or ability to do graduate work. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must hold a baccalaureate degree from an accredited college or university, but the bachelor's degree need not be in a related field of study. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art

and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your reason for pursuing a degree in City and Regional Planning, interest in Temple's program in particular, and future career goals.

### Standardized Test Scores:

**GRE/GMAT:** Due to testing limitations related to COVID-19, the Tyler School of Art and Architecture is temporarily waiving submission of GRE scores for applicants to the MS in City and Regional Planning degree program. Applicants may still voluntarily submit GRE test scores, but scores will only be used as a supplement to required application materials. All other admission requirements, including submission of scores for a standardized test of English, if applicable, still need to be met. In some circumstances, the Graduate Admissions Committee may request additional supplemental application materials or an interview as part of the admissions process.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** The City and Regional Planning Admissions Committee recommends the awarding of transfer credits on a case-by-case basis as applications are reviewed. The student may not receive transfer credit for coursework taken as part of any other awarded graduate degree. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 45

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
CTRP 5014	Planning Politics and Administration	3
CTRP 5413	Planning Communications	3
CTRP 5513	Planning Analysis	3
CTRP 5524	Spatial Analysis Techniques/Geographic Information Systems <sup>1</sup>	3
CTRP 8013	Planning History and Theory	3
CTRP 8016	Planning Law	3
CTRP 8213	Environmental Planning	3
<b>Electives <sup>2</sup></b>		<b>18</b>
<b>Capstone Course</b>		
CTRP 9889	Planning Studio	6
<b>Total Credit Hours</b>		<b>45</b>

1

With permission from the graduate advisor or chair of the Department of Architecture and Environmental Design, students who have had significant training in geographic information systems may be allowed to substitute an elective for CTRP 5524.

2

CTRP or related courses are selected in consultation with a department advisor.

Students may undertake one of two transcribed optional concentrations in fulfilling the coursework requirements for the MS degree:

## Sustainable Community Planning

Code	Title	Credit Hours
<b>Core Concentration Courses</b>		
CTRP 5256	Sustainable Community Design and Development	3
CTRP 8276	Regional Development	3
<b>Electives</b>		
Select two from the following: <sup>1</sup>		6
CTRP 8155	Ecological Planning and Development	
CTRP 8156	Neighborhoods, Cities, and Regions	
CTRP 8255	Sustainability in Suburban Communities	
CTRP 8257	Environmental Policy	
CTRP 8266	Sustainable Business Practices	
CTRP 8355	Environmental Infrastructure Planning and Management	
CTRP 8476	Collaborative Planning	
CTRP 8755	Introduction to Emergency Management Planning	
<b>Total Credit Hours</b>		<b>12</b>

1

In consultation with a department advisor or chair, students may substitute one relevant 3-credit CTRP graduate course as an elective.

## Transportation Planning

Code	Title	Credit Hours
<b>Core Concentration Course</b>		
CTRP 8655	Transportation Planning	3
<b>Electives</b>		
Select three from the following: <sup>1</sup>		9
CTRP 8276	Regional Development	
CTRP 8656	Integrated Transportation and Land-Use Planning: Context-Sensitive Design Solutions	
CTRP 8657	Non-motorized Transportation Planning	
CTRP 8666	Travel Demand Modeling	
<b>Total Credit Hours</b>		<b>12</b>

1

In consultation with a department advisor or chair, students may substitute one relevant 3-credit CTRP graduate course as an elective.

**Internship:** A supervised 180-hour internship is required. The internship emphasizes the acquisition and application of practical skills in planning. Placements are made at public agencies, nonprofit institutions and

private firms, with designated onsite and Planning and Community Development faculty supervisors. Internships may require interim reports and must culminate in a written report regarding the experience. Students have the option of registering for CTRP 9885 Internship in Planning for 3 elective credits. If the student has relevant professional experience, the internship requirement is waived and CTRP 9885 may not be taken for credit toward the degree.

### Culminating Events:

#### Capstone Course:

All students must complete CTRP 9889 Planning Studio (6 credits), which involves undertaking a planning project in cooperation with a local or regional client. Students synthesize the knowledge gained from previous courses in the development of an integrated approach that is appropriate to their project.

#### Thesis Option:

The master's thesis is substantial in length and follows a knowledge-enhancement model, based on planning theory, methodology and history. Requirements are specified in the Graduate School's *Dissertation and Thesis Handbook*, found at <https://grad.temple.edu/resources/dissertation-thesis-handbook>. Up to 6 elective credits may be earned for taking CTRP 9995 Thesis in Planning.

The student's Master's Committee is responsible for evaluating the thesis and its defense. No thesis should go to defense unless it is ready for public scrutiny. The committee evaluates the student's ability to express in writing and orally their research question, methodological approach, primary findings and implications. Committee members vote to pass or fail the thesis upon conclusion of the public defense. If the student must make revisions, those changes must be approved as arranged by the Master's Committee.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/city-and-regional-planning-ms-ta-ctrp-ms>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

Graduate Admissions Office:  
Tyler School of Art and Architecture  
tyleradmissions@temple.edu

215-777-9090

*Planning and Community Development Program Head:*

Jeffrey P. Doshna, PhD, AICP  
213 Architecture Building  
doshna@temple.edu  
215-204-1213

*Department Chairperson:*

Sasha W. Eisenman  
201 Dixon Hall  
eisenman@temple.edu  
267-468-8168

## Facilities Planning MS

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Science in Facilities Planning.

### About the Program

The Master of Science in Facilities Planning is designed for those with an academic background in facilities management at the undergraduate level or those with experience through practice who want to pursue an advanced degree that focuses on further specialization in their profession. The MS in Facilities Planning utilizes a workshop- and seminar-based curriculum. Group work that is part of the degree program takes place in the Facilities Management Lab in Tyler's Architecture Building, a shared group work environment for all facilities management students.

Students undertaking this degree program:

- add to their general knowledge base and/or develop a specialized knowledge base within the facilities management profession;
- develop knowledge, appreciation and a working relationship with other professionals to understand the management of facilities from the user's needs;
- increase their collaborative practice skills to be better prepared for the complex working environment in the facilities management industry; and
- learn to better articulate facility management needs.

Tyler School of Art and Architecture is committed to an interdisciplinary approach toward improving planning, design, construction, operation and management of appropriate facilities as a way forward in education and research. As much as possible in the classroom, students work in interdisciplinary teams to address problems of facilities, replicating, to some extent, the work environment in which they will engage. A concentration in Health Facilities, which is a collaborative effort between Tyler and the College of Public Health, is available to students who want to pursue health facilities management.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** Students may choose a concentration in Health Facilities, which is a collaborative effort between Tyler and the College of Public Health.

**Job Prospects:** The post-professional Master of Science in Facilities Planning offers working facilities management professionals and those seeking advancement in the field the opportunity to build on their professional skills and toolsets to elevate their competency.

**Non-Matriculated Student Policy:** Non-matriculated students must contact the Department of Architecture and Environmental Design for information. A maximum of 9 graduate credits can be taken at Temple University prior to applying to the program.

**Financing Opportunities:** The Department of Architecture and Environmental Design has a limited number of scholarships for graduate students. Students should also check the Tyler School of Art and Architecture and Student Financial Services websites for financial aid opportunities. Students should complete a FAFSA application to determine eligibility for student financial aid, work study employment within the Department of Architecture and Environmental Design, or other eligible on-campus jobs.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 6

*Spring:* November 1

Applications are reviewed as they are received after the deadline. Applicants must meet the January 6 priority deadline to be considered for financial assistance. After January 6, applications may be considered on a rolling basis.

Students are normally admitted in the Fall term. In the instance when students are admitted in the Spring, they may have limited course offerings in the first term because course sequencing begins in the Fall. See the Tyler School of Art and Architecture website for the most up-to-date application information.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members and/or professionals in the field who are familiar with the applicant's academic and professional competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. Applicants are expected to hold a degree in built environment professions, healthcare management or related fields. Candidates who studied in other disciplines as an undergraduate but who have gained knowledge of facilities or healthcare management as working professionals are also considered for admission. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program, educational and research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Due to testing limitations related to COVID-19, the Tyler School of Art and Architecture is temporarily waiving submission of GRE scores for applicants to the MS in Facilities Planning degree program. Applicants may still voluntarily submit GRE test scores, but scores will only be used as a supplement to required application materials. All other admission requirements, including submission of scores for a standardized test of English, if applicable, still need to be met. In some circumstances, the Graduate Admissions Committee may request additional supplemental application materials or an interview as part of the admissions process.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** All applicants must submit work samples of their most important and representative academic and/or professional work. Work samples can include analytical assessments, research reports, and/or other planning, design, creative and written work. Work samples from applicants who have been in a professional setting for a period of six years or more can include student work, but the applicant should instead emphasize work done in a professional setting and clearly articulate the applicant's role in the project. Papers, research or other materials (preferably dealing with the built environment) are invited as evidence of scholarly, academic or creative work. As much as possible, work samples should best represent the applicant's knowledge, aptitudes, interests, creative ability and experience relative to the program. As a guideline, the applicant should include approximately 20 images or other items.

Work samples are to be uploaded at <https://temple.slideroom.com>, as instructed on the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** The Architecture Admissions Committee recommends the awarding of graduate transfer credits on a case-by-case basis as applications are reviewed. The maximum number of graduate transfer credits a student may receive is 9.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree:* 30, whether or not the concentration is pursued

*Required Courses:*

## MS with No Concentration

Code	Title	Credit Hours
<b>Facilities Workshop Course</b>		
Select one from the following:		3
ARCH 5013	Facilities for Health Workshop 1	
ARCH 5015	Facilities for the Arts Workshop 1	
ARCH 5017	Facilities Workshop 1	
<b>Advanced Facilities Workshop Course</b>		
Select one from the following:		3
ARCH 5014	Facilities for Health Workshop 2	
ARCH 5016	Facilities for the Arts Workshop 2	
ARCH 5018	Facilities Workshop 2	
<b>Practice and Management Course</b>		
Select one from the following:		3
ARCH 5096	Health Facilities Practice and Management	
ARCH 8000	Spec Top Sem in Practice	
ARCH 8096	Professional Practice	
<b>Planning and Programming Course</b>		
Select one from the following:		3
ARCH 5033	Project Planning and Programming	
ARCH 5131	Form and Function in Health and Environments	
<b>Current Topics Courses</b>		
Select three from the following: <sup>1</sup>		3
ARCH 5132	Current Topics in Health Facilities Planning and Design	
ARCH 5133	Current Topics in Healthy Communities and Design	
ARCH 5134	Current Topics in Resilience and Design	
ARCH 5135	Current Topics in Energy and Performance	
ARCH 5136	Current Topics in Fabrication and Making	
ARCH 5137	Current Topics in Visualization	
ARCH 5138	Current Topics in Materials and Design	
<b>Architecture Electives</b> <sup>2</sup>		<b>6</b>
<b>Additional Electives</b> <sup>2</sup>		<b>9</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Multiple sections with different speakers are offered throughout the year. Course numbers may be taken more than once.

2

Electives are selected in consultation with an advisor.

## OR MS with Optional Concentration in Health Facilities

Code	Title	Credit Hours
<b>Core Courses</b>		
ARCH 5013	Facilities for Health Workshop 1	3
ARCH 5014	Facilities for Health Workshop 2	3
ARCH 5096	Health Facilities Practice and Management	3
ARCH 5131	Form and Function in Health and Environments	3

HIM 5112	Health Information Systems: Design and Decision Making	3
SBS 5001	Fundamentals of Public Health	3
<b>Architecture Current Topics Courses</b>		
Select three from the following: <sup>1</sup>		
ARCH 5132	Current Topics in Health Facilities Planning and Design	3
ARCH 5133	Current Topics in Healthy Communities and Design	
ARCH 5134	Current Topics in Resilience and Design	
ARCH 5135	Current Topics in Energy and Performance	
ARCH 5136	Current Topics in Fabrication and Making	
ARCH 5137	Current Topics in Visualization	
ARCH 5138	Current Topics in Materials and Design	
<b>College of Public Health Courses</b>		
Select three from the following: <sup>2</sup>		
HIM 5101	Fundamentals of Health Informatics	
HIM 5111	Technology for Healthcare Financial Management	
HIM 5128	Health Data: Standards and Interoperability	
HPM 5014	Leadership and Management in Non-Profit Organizations	
HPM 5122	Healthcare Quality and Safety	
<b>Total Credit Hours</b>		<b>30</b>

1

Multiple sections with different speakers are offered throughout the year. Course numbers may be taken more than once.

2

Courses are selected in consultation with an advisor.

**Culminating Event:** Successful completion of coursework earns the student the MS degree in Facilities Planning.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/facilities-planning-ms-ta-arfp-ms>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for Portfolio:

<https://temple.slideroom.com/>

## Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

## Department Contacts:

*Architecture Graduate Curricular Head:*

Pablo Meninato  
205 Architecture Building  
pablo.meninato@temple.edu  
610-659-9428

*Department Chairperson:*

Sasha W. Eisenman  
201 Dixon Hall  
eisenman@temple.edu  
267-468-8168

## Fibers and Materials Studies MFA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Fibers and Materials Studies.

## About the Program

The Fibers and Materials Studies program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree that pushes students to refine their aesthetic and embrace a broad definition of material exploration in relation to relevant global issues. Under the mentorship of an influential and diverse faculty and visiting artists on the cutting-edge of creative practice and critical inquiry, students find a compassionate, inclusive environment primed for experimentation, interdisciplinary collaboration and independent study.

Students have unlimited access to Tyler's state-of-the-art equipment and the abundant resources of Temple, a large public research university, to drive their research-based concepts. Fibers and Materials Studies MFA students also collaborate across the school through projects like Tyler's Natural Dye Garden, as well as leverage Philadelphia's landscape and vibrant DIY art scene to conduct community-based projects; study social and political issues; and examine the relationship between materials, processes and concepts.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** The Fibers and Materials Studies curriculum embraces material exploration—from community-based projects to experimental performance, sound and video—in relation to issues surrounding identity, power, sustainability and more. Through Art History classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world. Influential visiting artists and programs are matched to each cohort to accelerate their growth.

**Study Abroad:** Many Tyler MFA students choose to pursue summer study abroad opportunities at Temple University Rome, a home base for immersive artistic, academic and cultural exploration for Tyler students since 1966. Historically, students who have immersed themselves in

interdisciplinary thought and practice abroad have returned with their focused work strengthened.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** In the Fibers program, equipment is available for traditional and contemporary techniques, including new technologies that allow the development of surface imagery with photographic stencils, as well as the creation of weave structures on a Jacquard Loom TC2. Students are encouraged to experiment with the materials, techniques and concepts previously developed in their work.

**Job Prospects:** A Tyler Fibers and Materials Studies MFA degree prepares graduates for a rigorous studio practice and develops their aptitude to teach at leading institutions. Graduates are prepared for careers as professional artists, craftspersons, designers and educators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

All applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

### Coursework Required for Admission Consideration:

40 undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and a portfolio specific to Fibers and Materials Studies are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your specific interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the Department Coordinator, the student's advisor and the Vice Dean, up to 9 credits of graduate work completed at Temple University within a five-year period may be transferred into the program. Up to 6 credits of graduate coursework taken at other accredited institutions within the prior five years before matriculation may be considered for transfer into the program after the student has enrolled. No decisions are made until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 60

### Required Courses:

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8201/8202	Graduate Projects: Fibers I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses<sup>2</sup></b>		<b>9</b>
<b>Electives<sup>3</sup></b>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.

3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

#### **Culminating Events:**

##### *Thesis Exhibition:*

An approved thesis exhibition, with a written statement of working philosophy and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. The thesis exhibition should be the fruit of the two years' studio research and practice in which the student engaged. The student defends their thesis exhibition to the review committee. The committee then evaluates the exhibition as pass with distinction, pass or fail.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/fibers-and-materials-studies-mfa-ta-fibr-mfa>

### **Department Information:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### **Mailing Address for Official Transcripts:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### **Submission Address for Portfolio:**

<https://temple.slideroom.com/>

### **Submission Address for All Other Application Materials:**

<https://apply.temple.edu/Tyler/>

### **Department Contacts:**

#### *Fibers and Materials Studies MFA Program Director:*

Jesse Harrod  
jesseharrod@gmail.com  
215-777-9023

#### *Art Department Chairperson:*

Byron Wolfe  
byron.wolfe@temple.edu

215-777-9244

## **Glass MFA**

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Glass.

### **About the Program**

The Glass program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree that offers personal mentorship from faculty and visionary visiting artists in state-of-the-art facilities and encourages experimentation with media, interdisciplinary projects and public art to ignite social change.

The Glass program is a leading center of interdisciplinary thought and practice with state-of-the-art facilities and equipment. The program is ranked No. 2 in the nation among MFA glass programs by *U.S. News & World Report*.

The MFA experience at Tyler Glass is defined by our commitment to cultivate each graduate student's unique voice, with glass as only one of many modes of expression. Students explore the intersections of glass, sculpture, installation, video, performance, culture, making and criticism—an approach that has helped build one of the most tight-knit alumni communities in the discipline. Tyler MFA students take advantage of the school's location in Philadelphia, a vibrant art center with a strong glass tradition, and its proximity to New York City's arts resources to grow their creative practices and businesses and earn teaching positions in higher education at leading institutions.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** Through a studio-based approach complemented by art history classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world. Tyler's rigorous program empowers students to engage deeply and develop a holistic practice with supportive research and interdisciplinary exploration.

**Study Abroad:** Tyler MFA students may pursue study abroad opportunities at Temple's Japan Campus and Temple University Rome to expand their studies in a global context.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** The Glass studios are designed for the creation of works in all areas of glass blowing, glass casting, glass fusing and kiln work. Students are expected to demonstrate both conceptual and technical excellence in the area, as well as a profound interest in research and experimentation.

**Job Prospects:** The MFA program prepares graduates for careers as professional artists, craftspersons, designers and educators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.



**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: January 6

Applications are evaluated together after the deadline date.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

### Coursework Required for Admission Consideration: 40

undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and portfolio in Glass are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the Art Department Chairperson and the Vice Dean, up to 9 credits of graduate work may be transferred into the MFA program as Art History or Studio electives. Only credits received within five years of the transfer request are eligible. No decisions are made concerning transfer credits until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

Number of Credits Required to Earn the Degree: 60

Required Courses:

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8303/8304	Graduate Projects: Glass I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses<sup>2</sup></b>		<b>9</b>
<b>Electives<sup>3</sup></b>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.

3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

### Culminating Event:

*Thesis Exhibition:*

An approved thesis exhibition, with a written statement of working philosophy and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. The thesis exhibition should be the fruit of the two years' studio research and practice in which the student engaged. The student defends their thesis exhibition to the review committee. The committee then evaluates the exhibition as pass with distinction, pass or fail.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/glass-mfa-ta-glss-mfa>

## Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tylerart@temple.edu  
215-777-9090

## Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

## Submission Address for Portfolio:

<https://temple.slideroom.com/>

## Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

## Department Contacts:

*Glass MFA Program Director:*  
Jessica Jane Julius  
jessica.julius@temple.edu  
215-280-6521

*Art Department Chairperson:*  
Byron Wolfe  
byron.wolfe@temple.edu  
215-777-9244

# Graphic and Interactive Design MFA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Graphic and Interactive Design.

## About the Program

The Graphic and Interactive Design (GAID) program at the Tyler School of Art and Architecture is a two-year, 60-credit program. It offers intensive, research-driven immersion in the practice of design, with mentorship from passionate, award-winning faculty members who push students to hone their visual voices and use their talents to change the world.

GAID MFA students are a close-knit cohort of thinkers and makers who drive original concepts through interdisciplinary collaboration in Tyler's state-of-the-art facilities with the specialists, technology and resources of Temple, a leading research university. Tyler students have unique opportunities to apply their socially conscious designs across Philadelphia. This is a city that's a living laboratory for design-driven solutions with a booming design community that hosts one of the largest national chapters of the American Institute of Graphic Arts (AIGA) and offers easy access to other major design hubs, like New York and Washington, D.C.

Tyler GAID MFA graduates find jobs in top studios; start their own advertising agencies; work in the film, television and music industries; teach in leading colleges and universities; and improve society with the understanding that good design has the power to make a real difference.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** Through Art History classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** The design faculty at Tyler is made up of practicing graphic and interactive designers with established reputations in the field. It is the goal of the design faculty to challenge students to achieve the highest level of excellence in their work.

**Job Prospects:** Graduates from the MFA program have been extremely successful in the field. They work for print and web design companies, advertising agencies, publishing companies, and design departments of major corporations. They also work in film and television, music packaging and promotion, product design and packaging, and as freelance illustrators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, art directors and/or designers familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** 40 undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and a portfolio specific to Graphic and Interactive Design are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the department chairperson, the student's advisor, and the Associate Dean, up to 9 credits of graduate work completed at Temple University within a five-year period may be transferred into the program. Up to 6 credits of graduate coursework taken at other accredited institutions within the prior five years before matriculation may be considered for transfer into the program after the student has enrolled. No decisions are made until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree:* 60

*Required Courses:*

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8001	Graduate Professional Practices	3
GAD 8001/8002	Visual Design Graduate Seminar (4 terms) <sup>1</sup>	12
GAD 8083	Graphic Design Graduate Projects (3 terms)	9
GAD 8095/8096	Visual Design Thesis (4 terms) <sup>1</sup>	12
<b>Art History Courses</b> <sup>2</sup>		<b>12</b>
<b>Studio Electives</b> <sup>3</sup>		<b>12</b>
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Of the four required courses, two must be Art History Seminars chosen from a range of graduate ARTH offerings (5000 to 5800 or 8000 to 9980).

3

Course descriptions can be viewed on the Class Schedule. Note that enrolling in any course under 5000 for graduate credit requires prior approval from the studio area head.

**Culminating Event:**

*Thesis Exhibition with Slide Show:*

An approved thesis exhibition, with a written statement and slide portfolio, is required at the final review in order to meet the MFA requirements. Approval of the student's graduate committee is required.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/graphic-and-interactive-design-mfa-ta-gid-mfa>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for Portfolio:

<https://temple.slideroom.com/>

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

*Graphic and Interactive Design MFA Program Director:*

Kelly Holohan  
kholohan@temple.edu  
215-777-9733

*Department Chairperson:*

Dermot Mac Cormack  
dermot@temple.edu  
610-653-8227

## Landscape Architecture MLArch

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Landscape Architecture.

### About the Program

The Master of Landscape Architecture has an emphasis in ecological landscape restoration. Program objectives are to educate students to become capable practitioners with knowledge of a specialty area of

the discipline; to educate practitioners who are trained to think critically and creatively about each ecological situation; and to develop a body of knowledge through research, long-term monitoring of restored landscapes, and comparison of methods upon which current and future professionals can draw.

The American Society of Landscape Architects (ASLA) describes landscape architecture as a profession encompassing "the analysis, planning, design, management, and stewardship of the natural and built environments." Landscape architecture is a professional discipline focused on the promotion of environmental balance and human well-being through sustainable design. Ecological landscape restoration, the emphasis of this MLArch degree, has emerged as a critical dimension of landscape architecture over the past few decades. Landscape restoration increases local and regional biodiversity and mitigates potentially dangerous consequences of degradation through projects such as stream bank stabilization, created wetlands to help infiltrate stormwater, mine reclamation, industrial brownfield remediation, and reforestation of urban land. Understanding the ecological processes and natural history that constitute a site is fundamental to the design process.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Temple University Ambler, with some courses offered at the Main and Center City campuses. The Master of Landscape Architecture program has access to the Ambler Arboretum at Temple University and the Temple University Field Station at Ambler. Faculty and students use these resources in coursework and research. For more information, see <https://ambler.temple.edu/arboretum> and <https://ambler.temple.edu/fieldstation>.

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program is interdisciplinary and allows students to enroll in classes from allied disciplines. In addition to the courses in Landscape Architecture, the program builds on the field courses in Horticulture related to the woodland and riparian habitats at the Ambler campus. The program can also draw from the repository of local ecological landscape restoration examples and practitioners in the Philadelphia region.

**Affiliation(s):** The program is affiliated with the American Society of Landscape Architects (ASLA), the Council of Educators in Landscape Architecture (CELA), and the Society for Ecological Restoration (SER).

**Accreditation:** The Department of Architecture and Environmental Design offers two accredited programs in Landscape Architecture. The first professional Master of Landscape Architecture (MLArch) degree and the undergraduate Bachelor of Science in Landscape Architecture (BS) are both accredited by the Landscape Architectural Accreditation Board (LAAB) of the American Society of Landscape Architects (ASLA).

**Areas of Specialization:** The focus of the MLArch degree program is ecological landscape restoration, which emphasizes understanding of ecological processes and plant communities. This understanding is applied in a sequence of design studios. The design application results in connecting theory and scientific principles to creative application in the natural setting. The program educates practitioners skilled at designing beautiful landscapes that are also ecologically appropriate to their locale.

**Job Prospects:** Prepared with the knowledge to make informed and creative environmental design decisions, graduates are highly marketable and have the skills required of professional landscape architects,

including design, computer graphics, horticultural knowledge, technical competence and knowledge of restoration. According to Projections Central, which uses Labor Market Information (LMI) or individual State Employment Projections data, the job outlook between 2018 and 2028 is expected to grow in Pennsylvania by 4.8%, in New Jersey by 7.7%, in Maryland by 6.8%, and in New York State by 10.4%. Temple University's location in this region supports professional opportunities for graduates. This area has a very high concentration of prominent landscape architecture firms, public agencies and ecological restoration professionals.

**Licensure/Certification:** Licensure in Landscape Architecture is required to use the title "landscape architect" in all 50 U.S. states and the District of Columbia. Licensure for landscape architects is state regulated and must be obtained through achievement of three necessary components: (a) education, (b) professional practice experience, and (c) examination requirements. To obtain licensure, all states require candidates to pass the Landscape Architectural Registration Examination (L.A.R.E.), which is administered by the Council of Landscape Architectural Registration Boards (CLARB). Additionally, a majority of states require a degree that is accredited by the Landscape Architectural Accreditation Board (LAAB). Temple University's Master of Landscape Architecture is accredited by LAAB and prepares students to sit for the four-part computerized L.A.R.E.

Additional requirements (such as exams, questionnaires or training) may be required based on the individual requirements of the state in which one intends to become licensed. For more information, visit <https://www.asla.org/StateGovtAffairsLicensure.aspx>.

**Non-Matriculated Student Policy:** A maximum of 9 graduate credits can be taken at Temple University prior to applying to the program.

**Financing Opportunities:** Inquiries about funding should be directed to the Department of Architecture and Environmental Design.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 6

*Spring:* November 1

Applications are reviewed as they are received up through the deadline. Applicants must meet the January 6 priority deadline to be considered for financial assistance. After January 6, applications may be considered on a rolling basis. See the Tyler School of Art and Architecture website for the most up-to-date application information.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, employers and others who can evaluate the applicant's past work and/or ability to do graduate work. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals.

**Coursework Required for Admission Consideration:** All applicants apply directly to the MLArch program, not to a specific curricular track. Admitted students are placed in the appropriate track based on a thorough review of all application materials.

For students who have an undergraduate degree in Landscape Architecture, this program is a 44-credit post-professional degree. The program is also open to students without a degree in Landscape Architecture, but students without the appropriate prerequisite coursework need a maximum of 26 additional credits.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your reason for pursuing an advanced degree in Landscape Architecture, interest in Temple's program in particular, and aspirations and future career goals.

**Standardized Test Scores:**

GRE/GMAT: Due to testing limitations related to COVID-19, Tyler School of Art and Architecture is temporarily waiving submission of GRE scores for applicants to the MLArch in Landscape Architecture degree program. Applicants may still voluntarily submit GRE test scores, but scores will only be used as a supplement to required application materials. All other admission requirements, including submission of scores for a standardized test of English, if applicable, still need to be met. In some circumstances, the Graduate Admissions Committee may request additional supplemental application materials or an interview as part of the admissions process.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** Applicants have the option of submitting a portfolio. Portfolios from students with prior academic experience in Landscape Architecture should include design work done in academic settings. Portfolios may also include work in the visual arts or in visual communication. In addition, work completed in practice may be included but should clearly articulate the applicant's role in the project. Papers, research or other materials (preferably dealing with the built environment) are invited as evidence of scholarly, academic or creative work. Work chosen for inclusion in a portfolio should best represent the applicant's knowledge, aptitudes, interests, creative ability and experience relative to the discipline of Landscape Architecture. The portfolio may include up to 20 images or other items.

Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed on the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** The Landscape Architecture Programs Curricular Coordinator recommends the awarding of transfer credits on a case-by-case basis as applications are reviewed. The student may not receive

transfer credit for coursework taken as part of any other awarded graduate degree. The maximum number of transfer credits a student may receive is 9.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree:* 44 for students with an undergraduate degree in Landscape Architecture seeking a post-professional degree; 44-70 for students without an undergraduate degree in Landscape Architecture seeking a first professional degree

*Required Courses:*

### Post-Professional Degree (for students WITH an undergraduate degree in Landscape Architecture)

Year 1		
<b>Summer I</b>		<b>Credit Hours</b>
LARC 8789	Landscape Restoration Workshop	3
<b>Credit Hours</b>		<b>3</b>
<b>Fall</b>		
WOODLANDS		
LARC 5551	Landscape Architecture Computer Technology II	3
LARC 8151	Woodland Design Studio <sup>1</sup>	4
LARC 8351	Aesthetics of Ecological Design Seminar <sup>1</sup>	1
LARC 8751	Northeastern Woodland Ecosystems <sup>1</sup>	3
<b>Credit Hours</b>		<b>11</b>
<b>Spring</b>		
WETLANDS		
LARC 8152	Wetland/Riparian Design Studio <sup>2</sup>	4
LARC 8552	Research Design Methods	3
LARC 8752	Wetland Ecology <sup>2</sup>	3
Elective <sup>3</sup>		3
<b>Credit Hours</b>		<b>13</b>
<b>Year 2</b>		
<b>Fall</b>		
PUBLIC LANDS		
LARC 8153	Public Lands Design Studio	4
LARC 8355	Capstone Seminar	1
LARC 8755	Native Plant Communities	3
LARC 8889	Invasive Species Management and Restoration Monitoring	3
<b>Credit Hours</b>		<b>11</b>
<b>Spring</b>		
LARC 9995	Capstone Restoration Design Project	3
Elective <sup>3</sup>		3
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>44</b>

1

These three courses (8 credits) are co-requisites and must be taken together.

2

These two courses (7 credits) are co-requisites and must be taken together.

3

Students working toward the post-professional degree select two 3-credit electives in consultation with a Landscape Architecture advisor.

## First Professional Degree (for students WITHOUT an undergraduate degree in Landscape Architecture)

Year 1		
Fall		Credit Hours
PREREQUISITES		
HORT 8261	Native Woody Plant Identification	3
LARC 8141	Design Communications/Introductory Design Studio I	4
LARC 8241	Landscape Engineering I	3
LARC 8496	Landscape Traditions	3
<b>Credit Hours</b>		<b>13</b>
Spring		
PREREQUISITES		
HORT 8514	Landscape Restoration	3
LARC 5544	Landscape Architecture Computer Technology I	3
LARC 8144	Landscape Design Studio II	4
LARC 8242	Landscape Engineering II	3
<b>Credit Hours</b>		<b>13</b>
Summer		
LARC 8789	Landscape Restoration Workshop	3
<b>Credit Hours</b>		<b>3</b>
Year 2		
Fall		
WOODLANDS		
LARC 5551	Landscape Architecture Computer Technology II	3
LARC 8151	Woodland Design Studio <sup>1</sup>	4
LARC 8351	Aesthetics of Ecological Design Seminar <sup>1</sup>	1
LARC 8751	Northeastern Woodland Ecosystems <sup>1</sup>	3
<b>Credit Hours</b>		<b>11</b>
Spring		
WETLANDS		
LARC 8152	Wetland/Riparian Design Studio <sup>2</sup>	4
LARC 8552	Research Design Methods	3
LARC 8752	Wetland Ecology <sup>2</sup>	3
Elective <sup>3</sup>		3
<b>Credit Hours</b>		<b>13</b>
Year 3		
Fall		
PUBLIC LANDS		
LARC 8153	Public Lands Design Studio	4
LARC 8355	Capstone Seminar	1
LARC 8755	Native Plant Communities	3

LARC 8889	Invasive Species Management and Restoration Monitoring	3
<b>Credit Hours</b>		<b>11</b>
Spring		
LARC 8644	Professional Practice	3
LARC 9995	Capstone Restoration Design Project	3
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>70</b>

1

These three courses (8 credits) are co-requisites and must be taken together.

2

These two courses (7 credits) are co-requisites and must be taken together.

3

Students working toward the first professional degree select one 3-credit elective in consultation with a Landscape Architecture advisor.

**Internship:** All students work with a local or regional client as part of the Capstone Course (LARC 9995 Capstone Restoration Design Project).

### Culminating Event:

#### Capstone Course:

All students must complete LARC 9995 Capstone Restoration Design Project, which involves undertaking a project in cooperation with a local or regional client. Students synthesize the knowledge gained from previous courses in developing an integrated approach appropriate to their project.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/landscape-architecture-mlarch-ta-larc-mlar>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

*Landscape Architecture Program Head:*  
Kate Benisek, ASLA, MLA, MALD, BA  
206 Dixon Hall (Ambler) / 210X Tyler (Main)

kate.benisek@temple.edu  
268-463-8186

*Department Chairperson:*  
Sasha W. Eisenman  
eisenman@temple.edu  
267-468-8168

## Metals/Jewelry/CAD-CAM MFA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Metals/Jewelry/CAD-CAM.

### About the Program

The Metals/Jewelry/CAD-CAM program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree. The program at Tyler is an innovator in the field, providing students access to the latest technology and thinking, extensive tools and personal mentorship. These resources enable students to develop an excellent portfolio and be a well-prepared professional in the field.

Tyler offers MFA students access to state-of-the-art facilities; faculty leaders in the discipline; numerous visiting artists; support opportunities for research and travel to national conferences; the resources of a large public research university; and a welcoming and supportive community of artists, educators and thinkers. Tyler MFA students take advantage of faculty and alumni relationships in the art and craft world and the school's location in Philadelphia, a vibrant art center with a strong craft tradition, to grow their creative practices and businesses.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** MFA students are encouraged to expand their studies into other disciplines and utilize the many areas of expertise within the Tyler School of Art and Architecture. Through Art History classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world.

**Study Abroad:** Tyler MFA students may pursue summer study abroad opportunities at Temple's Japan Campus and Temple University Rome to expand their studies in a global context.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** Students explore a broad range of approaches to the field, including traditional metalsmithing skills, extensive and experimental use of digital fabrication technologies, large-scale electroforming, casting and laser welding.

**Job Prospects:** The MFA program prepares graduates for careers as professional artists, craftspersons, designers and educators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:* January 6

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

#### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

#### Coursework Required for Admission Consideration: 40

undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and a portfolio specific to Metals/Jewelry/CAD-CAM are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the appropriate department chairperson and the Vice Dean, up to 9 credits of graduate work may be transferred into the MFA program as Art History or Studio electives. Only credits received within five years of the transfer request are eligible. No decisions are made concerning transfer credits until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

Number of Credits Required to Earn the Degree: 60

Required Courses:

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8403/8404	Graduate Projects: Metals I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses</b> <sup>2</sup>		<b>9</b>
<b>Electives</b> <sup>3</sup>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.

3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

### Culminating Event:

*Thesis Exhibition:*

An approved thesis exhibition, with a written statement of working philosophy and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. The thesis exhibition should be the fruit of the two years' studio research and practice in which the student engaged. The student defends their thesis exhibition to the review committee. The committee then evaluates the exhibition as pass with distinction, pass or fail.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/metals-jewelry-cad-cam-mfa-ta-metl-mfa>

## Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

## Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

## Submission Address for Portfolio:

<https://temple.slideroom.com/>

## Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

## Department Contacts:

*Metals/Jewelry/CAD-CAM MFA Program Director:*

Doug Bucci  
Program Head  
dbucci@temple.edu  
215-777-9129

*Art Department Chairperson:*

Byron Wolfe  
byron.wolfe@temple.edu  
215-777-9244

## Painting MFA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Painting.

## About the Program

The Painting program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree. The program, which is ranked among the top 15 MFA programs in the nation by *U.S. News & World Report*, offers students access to unparalleled facilities and strong, personal mentorship.

With eight faculty members devoted to 16 MFA students, Tyler Painting provides something that few other top programs can give their students: substantial, engaged, one-on-one access to a diversity of painters and thinkers. The breadth and interdisciplinary nature of the Tyler approach is reinforced by exposure to practicing faculty artists in the school's other programs and its visiting artist and lecture series, which brings leading minds to Tyler to interact with graduate students.

Tyler MFA students take advantage of the school's location in Philadelphia, a vibrant art center and affordable home base near New York and Washington, D.C., to grow their creative practices. Graduates join an alumni community that includes highly accomplished and influential artists and teachers.



**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** Tyler's rigorous Painting curriculum supports the development of a personal vision rooted in a deep knowledge of materials and techniques augmented by bold experimentation and study of the history of art. Students participate in Art History courses, seminars, studio electives, time with visiting artists and gallery visits, all of which reinforce the program's emphasis on cross-disciplinary interaction and practice.

**Study Abroad:** Tyler Painting students have the opportunity to study abroad for a semester or a year at Temple University Rome, a home base for artistic, academic and cultural exploration for Tyler students since 1966.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** We encourage independent artistic exploration and development in an atmosphere of free and open exchange between students and professionally active faculty. Our aim is to produce artists who will be creatively active throughout their lives, enriching their communities in many different capacities.

**Job Prospects:** The MFA program prepares graduates for careers as professional artists, craftspersons, designers and educators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** 40 undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and a portfolio specific to Painting are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the appropriate department chairperson and the Associate Dean, up to 9 credits of graduate work may be transferred into the MFA program as Art History or Studio electives. Only credits received within five years of the transfer request are eligible. No decisions are made concerning transfer credits until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 60

*Required Courses:*

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8583	Graduate Projects: Painting I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses</b> <sup>2</sup>		<b>9</b>
<b>Electives</b> <sup>3</sup>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.

3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

#### **Culminating Event:**

*Thesis Exhibition with Slide Show:*

An approved thesis exhibition, with a written statement and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. Approval of the student's graduate committee is required.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/painting-mfa-ta-pntg-mfa>

### **Department Information:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### **Mailing Address for Official Transcripts:**

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### **Submission Address for Portfolio:**

<https://temple.slideroom.com/>

### **Submission Address for All Other Application Materials:**

<https://apply.temple.edu/Tyler/>

### **Department Contacts:**

*Painting MFA Program Director:*

Gerard Brown  
gbrown@temple.edu  
215-777-9713

*Art Department Chairperson:*

Byron Wolfe

byron.wolfe@temple.edu  
215-777-9244

## **Photography MFA**

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Photography.

### **About the Program**

The Photography program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree. The program offers students close mentorship, top facilities and interdisciplinary approaches, drawing on the resources available in Tyler's broad range of studio art programs as well as its architecture and environmental design programs. Whether students want to make bold moves into other disciplines through the lens of photography or be trained as classic still photographers, the breadth of faculty expertise and programs at Tyler offers a pathway, guided by one-on-one attention from faculty.

Students have access to both the resources of a large public research university and the warmth, support and spirit of collaboration that has come to define the Tyler Photography community. Tyler MFA students take advantage of faculty and alumni relationships in the photography and art world and the school's location in Philadelphia, a vibrant art center with a pioneering photographic tradition, and its proximity to New York and Washington, D.C., to grow their creative practices and careers.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** Tyler students expand their technical and conceptual approaches to their work through studio and seminar classes, and become actively involved in the broader art community by curating an ongoing series of exhibitions by established and emerging artists. Through Art History classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world.

**Study Abroad:** Students may elect to spend one of the two years of the program at Temple University Rome, a home base for immersive artistic, academic and cultural exploration for Tyler students since 1966.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** The Photography area houses studios that facilitate the use of various creative approaches to the medium, including black-and-white printmaking, critical theory, experimental and digital imaging, handmade cameras, historical processes, large-format photography, offset production, professional digital color and career options for artists.

**Job Prospects:** The MFA program prepares graduates for careers as professional photographers and educators. MFA graduates also explore the many fields of applied art and act as curators, critics and researchers.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members and gallery directors/curators familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

### Coursework Required for Admission Consideration: 40

undergraduate studio credits and 12 art history credits are required.

### Bachelor's Degree in Discipline/Related Discipline:

A baccalaureate degree and a portfolio in Photography are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your specific interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the department chairperson and the Vice Dean, up to 9 credits of graduate work may be transferred into the MFA program as Art History or Studio electives. Only credits received within five years of the transfer request are eligible. No decisions are made concerning transfer credits until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 60*

*Required Courses:*

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8683/8684	Graduate Projects: Photography I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses<sup>2</sup></b>		<b>9</b>
<b>Electives<sup>3</sup></b>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.

3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

### Culminating Event:

*Thesis Exhibition:*

An approved thesis exhibition, with a written statement of working philosophy and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. The thesis exhibition should be the fruit of the two years' studio research and practice in which the student engaged. The student defends their thesis exhibition to the review committee. The committee then evaluates the exhibition as pass with distinction, pass or fail.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/photography-mfa-ta-phot-mfa>

## Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

## Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

## Submission Address for Portfolio:

<https://temple.slideroom.com/>

## Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

## Department Contacts:

*Photography MFA Program Director:*  
Rebecca Michaels  
rebeccam@temple.edu  
215-777-9226

*Art Department Chairperson:*  
Byron Wolfe  
byron.wolfe@temple.edu  
215-777-9244

## Printmaking MFA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Printmaking.

## About the Program

The Printmaking program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree. Tyler Printmaking, a leading program for mentorship and critical thought in the discipline, is ranked as one of the top programs in the nation among MFA printmaking programs by *U.S. News & World Report*.

Tyler offers MFA students access to world-class faculty in a wide range of disciplines, all practicing artists themselves; private studios; state-of-the-art facilities; leading visiting artists; opportunities to attend New York Print Week and other national conferences; the resources of a large public research university; and a welcoming and supportive community of artists, educators and thinkers. Tyler MFA students take advantage of faculty and alumni relationships in the art world and the school's location in Philadelphia, a vibrant art center with a strong printmaking tradition, to grow their creative practices and businesses.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** Students explore a broad range of approaches to the field, including digital print media, large-scale printmaking, photo processes, 3-D installation and traditional printmaking disciplines. MFA students are encouraged to stretch their study into other disciplines. Through Art History classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world.

**Study Abroad:** MFA students may elect to spend one of the two years of the program at Temple University Rome, a home base for immersive artistic, academic and cultural exploration for Tyler students since 1966. As space is limited, faculty approval is required.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** The Printmaking area encompasses facilities for silkscreen, lithography and etching. MFA candidates work with faculty who are actively exhibiting professional artists. The faculty encourage the exploration of advanced printmaking techniques with full digital support and access to rapid prototyping tools.

**Job Prospects:** The MFA program prepares graduates for careers as professional artists and educators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** 40 undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and a portfolio specific to Printmaking are required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Tyler's program, research goals, future career goals, and academic and artistic achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the department chairperson and the Associate Dean, up to 9 credits of graduate work may be transferred into the MFA program as Art History or Studio electives. Only credits received within five years of the transfer request are eligible. No decisions are made concerning transfer credits until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 60

*Required Courses:*

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8783/8784	Graduate Projects: Printmaking I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses</b> <sup>2</sup>		<b>9</b>
<b>Electives</b> <sup>3</sup>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.

3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

### Culminating Event:

#### *Thesis Exhibition:*

An approved thesis exhibition, with a written statement of working philosophy and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. The thesis exhibition should be the fruit of the two years' studio research and practice in which the student engaged. The student defends their thesis exhibition to the review committee. The committee then evaluates the exhibition as pass with distinction, pass or fail.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/printmaking-mfa-ta-prnt-mfa>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for Portfolio:

<https://temple.slideroom.com/>

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

*Printmaking MFA Program Director:*  
Amze Emmons  
amze.emmons@temple.edu  
215-777-9125

*Art Department Chairperson:*

Byron Wolfe  
byron.wolfe@temple.edu

215-777-9244

## Sculpture MFA

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the Master of Fine Arts in Sculpture.

### About the Program

The Sculpture program at the Tyler School of Art and Architecture is a two-year, 60-credit program leading to the Master of Fine Arts (MFA) degree. It offers personal mentorship from faculty and visionary visiting artists in state-of-the-art facilities and encourages experimentation with media, interdisciplinary projects and public art to ignite social change.

Tyler Sculpture represents a small, supportive cohort of dynamic artists. The program's intensive, exploratory approach to sculpture, including material-based, film and video, sound, performance, large-scale architectural installation and time-based media, offers students exciting opportunities for collaboration and discourse with Tyler's entire faculty and MFA community, as well as access to all of Tyler's specialized shops.

Located in Philadelphia, an affordable city close to New York, Tyler offers MFA students opportunities to immerse themselves in a vibrant contemporary art scene and urban landscape at the intersection of art and social practice. It is an ideal home base for students to creatively address real-world problems and directly impact communities. A Tyler Sculpture MFA degree prepares graduates to be practicing artists and educators at colleges and universities.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is required.

**Interdisciplinary Study:** Tyler Sculpture's rigorous curriculum emphasizes mentorship, interdisciplinary study, experimentation and research to enrich practice and create theoretical, philosophical and concrete links between art and society. Through Art History classes, electives and seminars, students are engaged in emerging topics in the field and the broader art world.

**Study Abroad:** Tyler MFA students may pursue study abroad opportunities at Temple's Japan Campus and Temple University Rome to expand their studies in a global context.

**Accreditation:** This degree program is accredited by the National Association of Schools of Art and Design (NASAD).

**Areas of Specialization:** Courses provide a framework to develop individual creative practices and professional goals within a community of peers. The faculty to student ratio of two full-time Sculpture professors to eight graduate students provides a supportive learning environment, while encouraging a spirit of friendly competition. The professors are actively exhibiting artists with differing aesthetics and are able to provide mentorship in a range of areas within sculptural practice. Graduate students are selected to represent a diversity of sculptural approaches.

**Job Prospects:** The MFA program prepares graduates for careers as professional artists and educators.

**Non-Matriculated Student Policy:** MFA courses are restricted to matriculated students.

**Financing Opportunities:** In addition to federal student aid, teaching assistantships and fellowships are available on a competitive basis to support Tyler MFA students.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 6

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, gallery directors and/or curators familiar with the applicant's academic competence and abilities in the professional visual arts. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** 40 undergraduate studio credits and 12 art history credits are required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree and a documented portfolio of sculptural work are required. A wide range of media/disciplines may be appropriate, including IE-traditional and mixed sculptural media, performance, installation and time/sound-based media. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Tyler's program, research goals and philosophy of work, future career goals, and academic and artistic achievements.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** As a Master of Fine Arts applicant, you must submit a portfolio that consists of 20 images representative of the immediate direction of your work. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the appropriate department chairperson and the Vice Dean, up to 9 credits of graduate work may

be transferred into the MFA program as Art History or Studio electives. Only credits received within five years of the transfer request are eligible. No decisions are made concerning transfer credits until students have successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 60*

*Required Courses:*

Code	Title	Credit Hours
<b>Project and Seminar Courses</b>		
ART 8004	Critique and Critical Discourse I (2 terms)	6
ART 8005	Critique and Critical Discourse II (2 terms)	6
ART 8883	Graduate Projects: Sculpture I (4 terms) <sup>1</sup>	12
ART 9991	Directed Studio Practice (3 terms)	9
<b>Art History Courses</b> <sup>2</sup>		<b>9</b>
<b>Electives</b> <sup>3</sup>		<b>15</b>
<b>Culminating Course</b>		
ART 9995	Master of Fine Arts Thesis	3
<b>Total Credit Hours</b>		<b>60</b>

1

Courses are sequenced to be taken in the Fall and Spring terms. The sequence is repeated a second year for a total of four courses taken over four terms.

2

Students select three courses in Art History at the 5000 level or higher. Of these, ARTH 8402 Introduction to Critical Thinking and Practice is required, as is one Art History Seminar. Students may choose from the full range of graduate ARTH offerings for their third course.

3

Students must earn 3 credits in a studio elective and 3 credits in a professional practice experience course. Professional practice courses are offered in a range of fields such as Arts Management, Community Arts, and Teaching in Higher Education. The professional practice requirement may also be fulfilled by other courses with the approval of the Graduate Director. For the remaining 9 credits of electives, students complete coursework within the Tyler School of Art and Architecture. Students may enroll in courses in other Temple University schools and colleges, provided that coursework complements a particular research interest and has been preapproved by their advisor and the Graduate Director.

### Culminating Events:

*Thesis Exhibition:*

An approved thesis exhibition, with a written statement of working philosophy and slide and/or CD portfolio, is required at the final review in order to meet the MFA requirements. The thesis exhibition should be the fruit of the two years' studio research and practice in which the student engaged. The student defends their thesis exhibition to the review committee. The committee then evaluates the exhibition as pass with distinction, pass or fail.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/sculpture-mfa-ta-sclp-mfa>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for Portfolio:

<https://temple.slideroom.com/>

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

*Sculpture MFA Program Director:*

C.T. Jasper  
ctom@temple.edu  
215-777-9176

*Art Department Chairperson:*

Byron Wolfe  
byron.wolfe@temple.edu  
215-777-9244

## Graduate Certificate: Community Arts Practices

TYLER SCHOOL OF ART AND ARCHITECTURE

### About the Certificate

This graduate certificate is not open for enrollment for the 2023-2024 academic year.

## Graduate Certificate: Health Facilities Planning

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the graduate certificate in Health Facilities Planning.

### About the Certificate

The graduate certificate in Health Facilities Planning is a collaboration between the Tyler School of Art and Architecture and the College

of Public Health. The program offers coursework in health facilities planning and in public health so that students can understand the relationship between health management and health facilities. The required workshop course gives students the opportunity to work together in a classroom setting on academic projects that are best addressed through interdisciplinary collaborative work. This gives students a taste of the work environment in healthcare management and facilities planning.

Undertaking the graduate certificate in Health Facilities Planning allows students to:

- build a knowledge base about healthcare facilities in pursuit of a career in healthcare management;
- increase collaborative practice skills to be better prepared for the complex working environment in the facilities management industry; and
- better articulate healthcare facility planning needs through knowledge of jobs and goals of partners in the workplace environment.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact Tyler School of Art and Architecture's admissions advisor for more information.

**Non-Matriculated Student Policy:** To register for certificate courses as a non-matriculated student, please visit Tyler School of Art and Architecture's Non-Matriculating Students webpage found at <https://tyler.temple.edu/non-matriculating-students>.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
ARCH 5013	Facilities for Health Workshop 1	3
ARCH 5131	Form and Function in Health and Environments	3
HIM 5112	Health Information Systems: Design and Decision Making	3
<b>Elective</b>		
Select one from the following: <sup>1</sup>		3
HIM 5101	Fundamentals of Health Informatics	
HIM 5111	Technology for Healthcare Financial Management	
HIM 5128	Health Data: Standards and Interoperability	
SBS 5001	Fundamentals of Public Health	
<b>Total Credit Hours</b>		<b>12</b>

1

Additional electives may be selected with the approval of an advisor.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/health-facilities-planning-certificate-graduate-ta-hfpl-grad>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Department Contacts:

*Architecture Graduate Curricular Head:*  
Pablo Meninato  
205 Architecture Building  
pablo.meninato@temple.edu  
610-659-9428

*Department Chairperson:*  
Sasha W. Eisenman  
201 Dixon Hall  
eisenman@temple.edu  
267-468-8168

## Graduate Certificate: Sustainable Community Planning

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the graduate certificate in Sustainable Community Planning.

### About the Certificate

The graduate certificate in Sustainable Community Planning is available to non-matriculated students and students in other Temple University graduate programs, with the approval of their graduate advisor. The courses introduce students to the broad range of issues and topics relevant to planning for the sustainable development of our cities and regions. Elective courses provide the opportunity to deepen knowledge and training in specific areas of sustainability and environmental planning. Undertaking the graduate certificate in Sustainable Community Planning allows students to:

- understand the discourse of theory and practice of sustainable development at the local, regional and global levels;
- develop indicators to monitor and evaluate the sustainability of site, community and regional actions, plans and designs;
- recognize models of sustainability and know how to use such models to inform their professional practice; and
- understand how to incorporate sustainability principles into planning practice to address the interrelationships between social, economic and environmental factors.

This certificate meets the needs of public and private sector employees who work to improve the sustainability of neighborhoods, cities and



regions and to address the adverse impacts of climate change without academic degrees in planning.

**Campus Location:** Main and Center City

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact Tyler School of Art and Architecture's admissions advisor for more information.

**Non-Matriculated Student Policy:** To register for certificate courses as a non-matriculated student, please visit Tyler School of Art and Architecture's Non-Matriculating Students webpage found at <https://tyler.temple.edu/non-matriculating-students>.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12<sup>1</sup>, plus a prerequisite course in Environmental Planning<sup>2</sup>

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CTRP 5256	Sustainable Community Design and Development	3
CTRP 8276	Regional Development	3
<b>Electives</b>		
Select two from the following: <sup>3</sup>		6
CTRP 8155	Ecological Planning and Development	
CTRP 8156	Neighborhoods, Cities, and Regions	
CTRP 8255	Sustainability in Suburban Communities	
CTRP 8257	Environmental Policy	
CTRP 8266	Sustainable Business Practices	
CTRP 8355	Environmental Infrastructure Planning and Management	
CTRP 8476	Collaborative Planning	
CTRP 8755	Introduction to Emergency Management Planning	
<b>Total Credit Hours</b>		<b>12</b>

1

Students matriculated in the MS in City and Regional Planning program may elect to take the certificate courses as a transcribed concentration within the MS degree. Other graduate students matriculated at Temple University may take certificate classes as electives for their program with the approval of their program advisor.

2

The prerequisite in Environmental Planning may be taken concurrently with the required courses for the certificate. Students complete this prerequisite by taking CTRP 2213 Environmental Planning (3 s.h.) or CTRP 8213 Environmental Planning (3 s.h.); by demonstrating that comparable undergraduate or graduate coursework has already been completed; or through self-study that achieves the stated course competencies of CTRP 2213 or CTRP 8213.

3

For one elective, students may substitute a relevant 3-credit CTRP graduate course selected in consultation with a department advisor or chair.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/sustainable-community-planning-certificate-graduate-ta-scp-grad>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
[tyleradmissions@temple.edu](mailto:tyleradmissions@temple.edu)  
215-777-9090

### Department Contacts:

*Graduate Program Head:*

Jeffrey P. Doshna, PhD, AICP  
[doshna@temple.edu](mailto:doshna@temple.edu)  
215-204-1213

*Department Chairperson:*

Sasha W. Eisenman  
201 Dixon Hall  
[eisenman@temple.edu](mailto:eisenman@temple.edu)  
267-468-8168

## Graduate Certificate: Transportation Planning

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the graduate certificate in Transportation Planning.

### About the Certificate

The graduate certificate in Transportation Planning is available to non-matriculated students and students in other Temple University graduate programs, with the approval of their graduate advisor. The courses introduce the broad range of issues and topics relevant to transportation planning and the specific relationships between transportation planning and land use planning. Through elective courses, the certificate also provides the opportunity for students to deepen knowledge and training in specific areas of transportation planning. Undertaking the graduate certificate in Transportation Planning allows students to develop:

- knowledge of the key contemporary transportation and travel behavior challenges facing transportation planners and engineers;
- critical thinking skills to address these challenges and analyze important debates in the field; and
- familiarity with and basic competence in transportation planning methodologies.

This certificate meets the needs of public and private sector employees who work in the field of transportation planning without academic degrees in transportation planning or transportation engineering.

**Campus Location:** Main and Center City

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact Tyler School of Art and Architecture's admissions advisor for more information.

**Non-Matriculated Student Policy:** To register for certificate courses as a non-matriculated student, please visit Tyler School of Art and Architecture's Non-Matriculating Students webpage found at <https://tyler.temple.edu/non-matriculating-students>.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
<b>Core Course</b>		
CTRP 8655	Transportation Planning	3
<b>Electives</b>		
Select three from the following: <sup>2</sup>		9
CTRP 8276	Regional Development	
CTRP 8656	Integrated Transportation and Land-Use Planning: Context-Sensitive Design Solutions	
CTRP 8657	Non-motorized Transportation Planning	
CTRP 8666	Travel Demand Modeling	
<b>Total Credit Hours</b>		<b>12</b>

<sup>1</sup>

Students matriculated in the MS in City and Regional Planning program may elect to take the certificate courses as a transcribed concentration within the MS degree. Other graduate students matriculated at Temple University may take certificate classes as electives for their program with the approval of their program advisor.

<sup>2</sup>

For one elective, students may substitute a relevant 3-credit graduate course selected in consultation with a department advisor or chair.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/transportation-planning-certificate-graduate-ta-tp-grad>

## Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

## Department Contacts:

*Graduate Program Head:*

Jeffrey P. Doshna, PhD, AICP  
doshna@temple.edu  
215-204-1213

*Department Chairperson:*

Sasha W. Eisenman  
201 Dixon Hall  
eisenman@temple.edu  
267-468-8168

## Post-Master's Certificate: Teaching Art Education

TYLER SCHOOL OF ART AND ARCHITECTURE

Learn more about the post-master's certificate in Teaching Art Education.

## About the Certificate

The post-master's certificate in Teaching Art Education is a NASAD-accredited program that allows students to pursue Pennsylvania certification in art, grades Kindergarten through 12. The certificate program offers a pathway for those holding the MFA degree, as well as those with an MEd degree and a fine arts background, to add art teaching credentials to their professional portfolio. Students are evaluated by cooperating teachers and supervisors through two field placements in local schools. Journals, lesson planning, art making, curriculum development and a capstone exhibition of the work of their students are key elements of the certificate program.

Tyler students take full advantage of the school's location in Philadelphia and the city's rich array of schools, communities, museums, galleries and artists, opening up opportunities for artistic growth, research, networking and jobs. The Tyler faculty is committed to urban art education and the power of collaborating with communities. Tyler students not only learn how to teach art and grow as artists, but they also learn how to effect positive change in the communities where they work.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a full- or part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact Tyler School of Art and Architecture's admissions advisor for more information.

**Accreditation:** The Tyler School of Art and Architecture is accredited by the National Association of Schools of Art and Design (NASAD).

**Job Prospects:** The certificate program is dedicated to producing well-trained art teachers.

**Licensure/Certification:** Teacher certification is the process used in the United States to ensure that prospective K-12 teachers are qualified and prepared to teach at the levels and in the subjects that they intend to teach. Certification in Art Education prepares graduates to teach art to students from K-12. Certification is not always required by private institutions, but some may prefer to hire certified teachers.

In order to become certified in Art Education, students must complete a bachelor's degree from a regionally accredited institution of higher education, pass the *Praxis*® exams required in their state of employment, and satisfy other state-licensing examinations, as applicable.

Temple University is a Pennsylvania state-approved teacher preparation program for K-12 Art. See <https://www.education.pa.gov/Educators/Certification/BecomeAnEducator/Pages/ACPSpecialty.aspx>. Completion of Temple University's Teaching Art Education post-master's certificate satisfies the necessary requirements for graduates to sit for the *Praxis*® Core Academic Skills for Educators, *Praxis*® Subject Assessments, and *Praxis*® Fundamentals.

For certification in some states, students may need to take the *Praxis*® Principles of Learning and Teaching (PLT) exam for their desired grade levels, which they are prepared for through their field placements, classroom observations, and study of human development and pedagogy.

**Non-Matriculated Student Policy:** Only certain courses are available to non-matriculated graduate students. Please contact the Department of Art Education and Community Arts Practices for more information.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 6

*Spring:* November 1

All applications are evaluated together after deadline date. Applicants must meet the January 6 priority deadline to be considered for financial assistance. After January 6, applications may be considered on a rolling basis.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty, art teachers or supervisors, and curators or gallery directors familiar with the applicant's academic and artistic competence. The letters should be submitted with the application at <https://apply.temple.edu/Tyler/>, along with the statement of goals and resume.

**Coursework Required for Admission Consideration:** Applicants must have an undergraduate degree, 40 undergraduate studio credits, and 9 art history credits.

**Master's Degree in Discipline/Related Discipline:** An MFA degree in Art is required. An MEd degree, complemented by a fine arts background, is also accepted.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Art or Art Education is required. Official transcripts from all universities/colleges attended, whether or not a degree was awarded, must be sent to the Tyler School of Art and Architecture, Graduate Admissions Office, 2001 N. 13th Street, Philadelphia, PA 19122-6016.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program in particular, future career goals, and academic and artistic endeavors and achievements.

### Standardized Test Scores:

GRE: Scores should be in the 50th percentile or higher on the verbal and/or analytical sections. Students with concerns about scores should contact the Chair of the Department of Art Education and Community Arts Practices.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** Applicants must submit a portfolio that consists of 20 images representative of their range of experience and the immediate direction of their work. Include a variety of drawings. Portfolios are to be uploaded at <https://temple.slideroom.com>, as instructed at the website. SlideRoom requires an additional fee for this service. Original work, slides, CD-ROMs, catalogs, photographs, books and/or binders are not acceptable substitutes for the SlideRoom portfolio and will not be reviewed or returned.

**Resume:** Current resume required.

**Transfer Credit:** Upon approval of the Art Education Program Director, the student's advisor, and the Associate Dean, up to 9 credits of graduate work completed at Temple University within a five-year period may be transferred into the program. Up to 6 credits of graduate coursework taken at other accredited institutions within the prior five years before matriculation may be considered for transfer into the program after the student has enrolled. No decisions are made until a student has successfully completed 15 matriculated credits at Tyler. The maximum number of credits a student may transfer is 9.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 21<sup>1</sup>

### Required Courses:

Code	Title	Credit Hours
ARTE 5003	Inclusive Art Education K-12 Students in the Art Room	3
ARTE 5888	Student Teaching	6
ARTE 8001	Contemporary Issues in Art Education <sup>2</sup>	3
	or ARTE 8002 History of Art Education	
	or ARTE 8003 Art Education Research	
ARTE 9187	Graduate Materials and Methods in Art	3
EDUC 5402	Child and Adol Develop	3

TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Total Credit Hours</b>		<b>21</b>

Lisa Kay  
lisakay@temple.edu  
215-777-9264

1

The post-master's certificate program in Teaching Art Education of 21 credits, along with successful completion of the state-required *Praxis*® Fundamental Subjects: Content Knowledge exam and *Praxis*® Art: Content Knowledge exam, fulfills all of the requirements for Pennsylvania State Certification in Art for Kindergarten through grade 12. Pennsylvania Teaching Certification is awarded to U.S. citizens only.

2

ARTE 8003 is only recommended for students who have a particular interest in Art Education Research. The course is designed mainly for MEd students preparing for thesis research.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

**Internship:** An internship is required when seeking Teaching Certification.

**Culminating Event:**

*Artwork Exhibition:*

At the end of the final term, students present a capstone exhibition of their students' work.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/teaching-art-education-certificate-graduate-ta-tart-grpm>

### Department Information:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016  
tyleradmissions@temple.edu  
215-777-9090

### Mailing Address for Official Transcripts:

Tyler School of Art and Architecture  
Graduate Admissions Office  
2001 N. 13th Street  
Philadelphia, PA 19122-6016

### Submission Address for Portfolio:

<https://temple.slideroom.com/>

### Submission Address for All Other Application Materials:

<https://apply.temple.edu/Tyler/>

### Department Contacts:

*Graduate Program Director:*  
Renee Jackson  
renee.jackson@temple.edu  
215-777-9258

*Department Chairperson - Art Education and Community Arts Practices:*

## Fox School of Business and Management

The vision of Temple University's Fox School of Business and Management is to transform student lives, develop leaders, and impact our local and global communities through excellence and innovation in education and research.

The Fox School's research institutes and centers, as well as 275 full- and part-time faculty, provide access to market-leading technologies and foster a collaborative and creative learning environment that offers more than a standard curriculum: *it offers an experience*. Coupled with its leading student services, the Fox School ensures that its graduates are fully prepared to enter the job market.

The flexibility and responsiveness of our innovative research faculty allow the school to address the needs of the industry and generate courses and programs in emerging fields. As a leader in business research, the Fox School values interdisciplinary approaches and translational research that influence and impact real-world problems. Our research informs an adaptive curriculum, supports innovation in teaching, and prepares students for the ever-changing business environment.

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- Graduate Certificate: Management Consulting (p. 158)
- Graduate Certificate: Organizational Leadership (p. 158)
- Graduate Certificate: Real Estate (p. 159)

### Graduate Faculty

*Aleksi Aaltonen*, Assistant Professor, Department of Management Information Systems, Fox School of Business and Management; PhD, London School of Economics.

*Edoardo Airoidi*, Professor, Department of Statistics, Operations, and Data Science, Fox School of Business and Management; PhD, Carnegie Mellon University.

*Ronald C. Anderson*, Professor, Department of Finance, Fox School of Business and Management; PhD, Texas A and M University.

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*Sezgin Ayabakan*, Assistant Professor, Department of Management Information Systems, Fox School of Business and Management; PhD, University of Texas at Dallas.

*Xue Bai*, Professor, Department of Statistics, Operations, and Data Science, Fox School of Business and Management; PhD, Carnegie Mellon University.

*Gurdip Bakshi*, Marvin Wachman Professor, Department of Finance, Fox School of Business and Management; PhD, University of Wisconsin-Madison.

*Steven Balsam*, Professor, Department of Accounting, Fox School of Business and Management; PhD, City University of New York.

*Rajiv Banker*, Professor and the Stanley Merves Chair in Accounting, Information Technology and Management, Department of Accounting, Fox School of Business and Management; DBA, Harvard University.

*Sudipta Basu*, Professor, Department of Accounting, Fox School of Business and Management; PhD, University of Rochester.

*Konstantin Bauman*, Assistant Professor, Department of Management Information Systems, Fox School of Business and Management; PhD, Moscow State University.

*Gary J. Blau*, Professor, Department of Management, Fox School of Business and Management; PhD, University of Cincinnati.

*Jeffrey R. Boles*, Associate Professor, Department of Risk, Actuarial Science, and Legal Studies, Fox School of Business and Management; PhD, University of California Berkeley.

*Dmitri Byzalov*, Associate Professor, Department of Accounting, Fox School of Business and Management; PhD, Harvard University.

*Yiwei Chen*, Assistant Professor, Department of Statistics, Operations, and Data Science, Fox School of Business and Management; PhD, Massachusetts Institute of Technology.

*J. Jay Choi*, Laura H. Carnell Professor, Department of Finance, Fox School of Business and Management; PhD, New York University.

*Benjamin Collier*, Associate Professor, Department of Risk, Actuarial Science, and Legal Studies, Fox School of Business and Management; PhD, University of Kentucky.

*John R. Deckop*, Professor, Department of Management, Fox School of Business and Management; PhD, University of Minnesota.

*C. Anthony Di Benedetto*, Professor, Department of Marketing, Fox School of Business and Management; PhD, McGill University.

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*Enrique A. Gomez*, Assistant Professor, Department of Accounting, Fox School of Business and Management; PhD, University of Georgia.

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*Martin Grace*, Harry Cochran Professor in Risk, Insurance and Healthcare Management, Department of Risk, Actuarial Science, and Legal Studies, Fox School of Business and Management; PhD, University of Florida.

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*Leila Hosseini*, Assistant Professor, Department of Management Information Systems, Fox School of Business and Management; PhD, University of Texas at Dallas.

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*Kenichiro McAlinn*, Assistant Professor, Department of Statistics, Operations, and Data Science, Fox School of Business and Management; PhD, Duke University.

*John A. McClendon*, Associate Professor, Department of Management, Fox School of Business and Management; PhD, University of South Carolina.

*Thorsten P. Moenig*, Associate Professor, Department of Risk, Actuarial Science, and Legal Studies, Fox School of Business and Management; PhD, Georgia State University.

*Solon Moreira*, Assistant Professor, Department of Management, Fox School of Business and Management; PhD, Copenhagen Business School.

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*Todd Schifeling*, Assistant Professor, Department of Management, Fox School of Business and Management; PhD, University of Michigan.

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*Jonathan A. Scott*, Professor, Department of Finance, Fox School of Business and Management; PhD, Purdue University.

*Tianxiang (Tim) Shi*, Associate Professor, Department of Risk, Actuarial Science, and Legal Studies, Fox School of Business and Management; PhD, University of Waterloo.

*Indrajit Sinha*, Associate Professor, Department of Marketing, Fox School of Business and Management; PhD, University of Michigan.

*Joydeep Srivastava*, Professor, Department of Marketing, Fox School of Business and Management; PhD, University of Arizona.

*Minhui (Barbara) Su*, Assistant Professor, Department of Accounting, Fox School of Business and Management; PhD, University of Toronto.

*Chung (Jennifer) Won Tae*, Assistant Professor, Department of Management, Fox School of Business and Management; PhD, London School of Business.

*Vivek Tandon*, Assistant Professor, Department of Management, Fox School of Business and Management; PhD, University of Michigan.

*Cheng-Yong Tang*, Professor, Department of Statistics, Operations, and Data Science, Fox School of Business and Management; PhD, Iowa State University.

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*Michael Valenza*, Associate Professor, Department of Risk, Actuarial Science, and Legal Studies, Fox School of Business and Management; JD, Temple University.

*Vinod Venkatraman*, Associate Professor, Department of Marketing, Fox School of Business and Management; PhD, Duke University.

*Krupa S. Viswanathan*, Associate Professor, Department of Risk, Actuarial Science, and Legal Studies, Fox School of Business and Management; PhD, University of Pennsylvania.

*Ryan M. Vogel*, Associate Professor, Department of Management, Fox School of Business and Management; PhD, University of Georgia.

*Monica Wadhwa*, Associate Professor, Department of Marketing, Fox School of Business and Management; PhD, Stanford University.

*Wei Wang*, Assistant Professor, Department of Accounting, Fox School of Business and Management; PhD, University of Missouri-Columbia.

*Sunil Wattal*, Professor, Department of Management Information Systems, Fox School of Business and Management; PhD, Carnegie Mellon University.

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## Accountancy MAcc

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Accountancy.

### About the Program

The Master of Accountancy program is designed for students who seek the CPA designation and a career in either public or private accounting. The MAcc curriculum builds on accounting undergraduate work and is focused on advanced-level accounting, auditing, data analytics, taxation and related technologies. Time to study and sit for the CPA exam is incorporated into the program's schedule, providing a practical timeline to pass all four parts of the CPA exam during the program. MAcc faculty and career development coaches work with students one-on-one to help identify the career opportunity that is best suited for each individual from among our close-knit recruiting partnerships with Big Four, national and regional public accounting firms, and industry partners.

**Time Limit for Degree Completion:** The Fox Master of Accountancy is designed to be completed in one year with full-time study or across two years if studying part-time. Graduate School guidelines allow up to six years, however, for completion of the master's degree.

**Campus Location:** Main, Center City, and Online

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The Fox Master of Accountancy is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. Graduates are typically hired by public accounting firms or the accounting industry.

**Non-Matriculated Student Policy:** Students who would like to pursue a Master of Accountancy degree who were not accounting majors while undergraduates may take six required prerequisite courses as a non-matriculated student at Temple University, if approved by the Director of the MAcc program. Non-matriculated students must earn a "B" or better in the following six courses for consideration:

Code	Title	Credit Hours
ACCT 2101	Financial Accounting	3
ACCT 2521	Cost Accounting	3
ACCT 3511	Intermediate Accounting I	3
ACCT 3512	Intermediate Accounting II	3

ACCT 3531	Federal Taxes on Income	3
ACCT 3596	Auditing	3

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program. The program also offers merit- and need-based scholarships to eligible admitted students.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:*

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis.

APPLY ONLINE to this Fox graduate program.

#### Letters of Reference:

*Number Required:* 1 (optional)

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Coursework Required for Admission Consideration:** Applicants must have completed the undergraduate accounting courses (or equivalent) identified below before undertaking MAcc coursework. Those who apply to the program while satisfying the prerequisite courses must complete these prerequisites with a grade of "B-" or better before final acceptance can be granted:

Code	Title	Credit Hours
ACCT 2101	Financial Accounting	3
ACCT 2521	Cost Accounting	3
ACCT 3511	Intermediate Accounting I	3
ACCT 3512	Intermediate Accounting II	3
ACCT 3531	Federal Taxes on Income	3
ACCT 3596	Auditing	3

**MAcc Summer Bridge Program:** Prospective students who have no previous accounting or business education may pursue a master's degree in Accountancy through the MAcc Summer Bridge program, which prepares students with the fundamental business background knowledge they need to succeed in the MAcc degree program.

Prerequisites for admission into the MAcc Summer Bridge program include successful completion of financial accounting at Fox or another accredited institution; self-study of introductory financial accounting through an approved online platform such as Coursera, which requires a certificate of completion; or the equivalent of financial accounting through the CLEP exam. This coursework is required:



Course	Title	Credit Hours
<b>Year 1</b>		
<b>Summer I</b>		
ACCT 2521	Cost Accounting	3
ACCT 3511	Intermediate Accounting I	3
<b>Credit Hours</b>		<b>6</b>
<b>Summer II</b>		
ACCT 3512	Intermediate Accounting II	3
ACCT 3531	Federal Taxes on Income	3
ACCT 3596	Auditing	3
<b>Credit Hours</b>		<b>9</b>
<b>Total Credit Hours</b>		<b>15</b>

Students who hold a four-year bachelor's degree from a regionally accredited college or university who complete the MAcc Summer Bridge program with at least a cumulative GPA of 3.0 and at least a "B-" in each of the required courses listed above are eligible to enroll in the MAcc program in the Fall term.

To determine if Fox's MAcc Summer Bridge program is right for you, contact Cory Ng, academic director of the Master of Accountancy program, at [cory.ng@temple.edu](mailto:cory.ng@temple.edu) or Chang Liu, associate director of graduate admissions, at [chang.liu@temple.edu](mailto:chang.liu@temple.edu).

The accounting prerequisite courses for the MAcc Summer Bridge program can be completed through the Office of Continuing Studies. To register for the courses, first-time Continuing Studies students must complete an online application. After completing the application, you will receive a message from [Cstudies@temple.edu](mailto:Cstudies@temple.edu) to schedule a Zoom meeting.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

**Standardized Test Scores:**

GMAT/GRE: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MAcc program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the department chair.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:<sup>1</sup>*

Code	Title	Credit Hours
ACCT 5170	Special Topics	1
ACCT 5201	Advanced Studies in Financial Reporting	3
ACCT 5202	Enterprise Systems and Data Analytics	3
ACCT 5203	Professional Skills Development	3
ACCT 5204	Advanced Auditing and Assurance Services	3
ACCT 5205	Advanced Federal Taxation	3
ACCT 5206	Law Ethics & Regulations	3
ACCT 5207	Concepts and Analysis of Financial Statements	3
ACCT 5209	Taxes & Business Strategy	2
ACCT 5211	Advanced Data Analytics and Innovation in Accounting	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice (3 terms)	3
<b>Total Credit Hours</b>		<b>30</b>

1

Each semester, a CPA review course is open to students in the full-time program to prepare them to sit for the various parts of the CPA exam:

- Financial Accounting and Reporting (FAR) is taken during the last two months of the Fall term.
- Regulation (REG) is taken during the last two months of the Spring term.
- Auditing and Attestation (AUD) is taken during the first two weeks of August, after the Summer term has ended.
- Business Environment and Concepts (BEC) is taken during the program. Students are encouraged to consult with the Academic Director for the recommended timing. After January 1, 2024, BEC is replaced with one of three disciplines: Business Analysis and Reporting (BAR), Information Systems and Controls (ISC), or Tax Compliance and Planning (TCP).

## Full-Time MAcc

<b>Year 1</b>		
Fall		Credit Hours
ACCT 5170	Special Topics	1
ACCT 5201	Advanced Studies in Financial Reporting	3
ACCT 5202	Enterprise Systems and Data Analytics	3
ACCT 5203	Professional Skills Development	3

ACCT 5287	Colloquium on Current Issues in Accounting Practice	1
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During the last two months of the Fall term, students take a CPA review course and sit for the Financial Accounting and Reporting (FAR) part of the CPA exam.<sup>1</sup>

<b>Credit Hours</b>	<b>11</b>
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### Spring

ACCT 5205	Advanced Federal Taxation	3
ACCT 5206	Law Ethics & Regulations	3
ACCT 5211	Advanced Data Analytics and Innovation in Accounting	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1

During the last two months of the Spring term, students take a CPA review course and sit for the Regulation (REG) part of the CPA exam.<sup>1</sup>

<b>Credit Hours</b>	<b>10</b>
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### Summer

ACCT 5204	Advanced Auditing and Assurance Services	3
ACCT 5207	Concepts and Analysis of Financial Statements	3
ACCT 5209	Taxes & Business Strategy	2
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1

During the first two weeks of August after the Summer term has ended, students take a CPA review course and sit for the Auditing and Attestation (AUD) part of the CPA exam.<sup>1</sup>

<b>Credit Hours</b>	<b>9</b>
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<b>Total Credit Hours</b>	<b>30</b>
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1

The CPA exam review course for Business Environment and Concepts (BEC) is also built into the program. After January 1, 2024, BEC is replaced with one of three disciplines: Business Analysis and Reporting (BAR), Information Systems and Controls (ISC), or Tax Compliance and Planning (TCP). Students are encouraged to consult with the Academic Director for the recommended timing.

## Part-Time MAcc with a Fall Term Start<sup>1</sup>

Year 1		Credit Hours
<b>Fall</b>		
ACCT 5170	Special Topics	1
ACCT 5202	Enterprise Systems and Data Analytics	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1
<b>Credit Hours</b>		<b>5</b>
<b>Spring</b>		
ACCT 5205	Advanced Federal Taxation	3
ACCT 5211	Advanced Data Analytics and Innovation in Accounting	3
<b>Credit Hours</b>		<b>6</b>
<b>Summer</b>		
ACCT 5207	Concepts and Analysis of Financial Statements	3
ACCT 5209	Taxes & Business Strategy	2
<b>Credit Hours</b>		<b>5</b>

Year 2		Credit Hours
<b>Fall</b>		
ACCT 5201	Advanced Studies in Financial Reporting	3
ACCT 5203	Professional Skills Development	3
<b>Credit Hours</b>		<b>6</b>
<b>Spring</b>		
ACCT 5206	Law Ethics & Regulations	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1
<b>Credit Hours</b>		<b>4</b>
<b>Summer</b>		
ACCT 5204	Advanced Auditing and Assurance Services	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1
<b>Credit Hours</b>		<b>4</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Part-time students are encouraged to consult with the Academic Director for the recommended timing to study and sit for the various sections of the CPA exam: Financial Accounting and Reporting (FAR), Regulation (REG), Auditing and Attestation (AUD), and Business Environment and Concepts (BEC). After January 1, 2024, BEC is replaced with one of three disciplines: Business Analysis and Reporting (BAR), Information Systems and Controls (ISC), or Tax Compliance and Planning (TCP).

## Part-Time MAcc with a Spring Term Start<sup>1</sup>

Year 1		Credit Hours
<b>Spring</b>		
ACCT 5205	Advanced Federal Taxation	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1
<b>Credit Hours</b>		<b>4</b>
<b>Summer</b>		
ACCT 5207	Concepts and Analysis of Financial Statements	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1
<b>Credit Hours</b>		<b>4</b>
<b>Year 2</b>		
<b>Fall</b>		
ACCT 5201	Advanced Studies in Financial Reporting	3
ACCT 5202	Enterprise Systems and Data Analytics	3
<b>Credit Hours</b>		<b>6</b>
<b>Spring</b>		
ACCT 5206	Law Ethics & Regulations	3
ACCT 5211	Advanced Data Analytics and Innovation in Accounting	3
<b>Credit Hours</b>		<b>6</b>
<b>Summer</b>		
ACCT 5204	Advanced Auditing and Assurance Services	3
ACCT 5209	Taxes & Business Strategy	2
<b>Credit Hours</b>		<b>5</b>

Year 3		
Fall		
ACCT 5170	Special Topics	1
ACCT 5203	Professional Skills Development	3
ACCT 5287	Colloquium on Current Issues in Accounting Practice	1
<b>Credit Hours</b>		<b>5</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Part-time students are encouraged to consult with the Academic Director for the recommended timing to study and sit for the various sections of the CPA exam: Financial Accounting and Reporting (FAR), Regulation (REG), Auditing and Attestation (AUD), and Business Environment and Concepts (BEC). After January 1, 2024, BEC is replaced with one of three disciplines: Business Analysis and Reporting (BAR), Information Systems and Controls (ISC), or Tax Compliance and Planning (TCP).

**Culminating Event:** Successful completion of coursework is required to earn the MAcc degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/accountancy-macc-bu-accn-macc>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Academic Director:*

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*Specialized Master's Programs Coordinator:*

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## Accounting and Financial Management MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

This program is not accepting applications for the 2023-2024 academic year.

## Actuarial Science MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Actuarial Science.

### About the Program

The Fox School of Business and Management has a longstanding tradition of preparing our students with the power to lead within the world of business. Actuaries specialize in the evaluation of insurance and financial risks and distinguish themselves through a combination of analytical skills, business acumen and professionalism. Temple's Actuarial Science MS program prepares students for a successful career in the field through its rigorous coursework and exceptional opportunities for professional development. Our curriculum covers multiple professional actuarial exams and can be tailored to students' interests and background.

We are recognized as a Center of Actuarial Excellence (CAE) by the Society of Actuaries (SOA) and as a Global Center of Insurance Excellence (GCIE) by the International Insurance Society. In 2020, we received the CAS University Award from the Casualty Actuarial Society. We participate in SOA's University Earned Credit (UEC) program, allowing students to earn credit for all five eligible actuarial exams (ALTAM, ASTAM, FAM, FM, SRM) through their coursework at Temple.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MS in Actuarial Science is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** Actuaries hold positions of responsibility with consulting firms, government insurance programs, government regulatory organizations, insurance companies and investment banks. We help prepare students for these careers through our coursework and our extensive professional development opportunities, including an on-campus actuarial career fair and a resume book. The Fox Center for Student Professional Development (CSPD) provides students with additional career coaching and professional development resources that support the job search.

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

#### Spring:

- August 1 – Scholarship Deadline and International Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required: 1*

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### Standardized Test Scores:

GRE/GMAT: Required. Scores for the GRE typically fall within the following percentile ranges: 50 to 99 Verbal; 80 to 99 Quantitative. Exam P may be accepted in place of GMAT/GRE.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MS program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the

department chair. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses <sup>1</sup></b>		
AS 5101	Theory of Interest	3
AS 5102	Long-Term Actuarial Modeling	3
AS 5104	Short-Term Actuarial Modeling	3
AS 5108	Actuarial Analytics	3
BA 5687	Advanced Professional Development Strategies	0
RMI 5051	Managing Risk	3
Select two from the following:		6
AS 5103	Advanced Long-Term Actuarial Modeling	
AS 5114	Advanced Short-Term Actuarial Modeling	
AS 5118	Advanced Actuarial Analytics	
AS 5190	Special Topics in Actuarial Science	
Select one from the following:		3
RMI 5101	Managing Human Capital Risk	
RMI 5104	Managing Property and Liability Risk	
<b>Electives <sup>2</sup></b>		
ACCT 5001	Accounting for Managerial and Investment Analysis and Planning	
AS 5015	Introduction to Actuarial Spreadsheets and Programming	
AS 5022	Actuarial Statistics	
AS 5103	Advanced Long-Term Actuarial Modeling	
AS 5105	Actuarial Economics	
AS 5106	Actuarial Corporate Finance	
AS 5114	Advanced Short-Term Actuarial Modeling	
AS 5116	Financial Reporting for Actuaries	
AS 5118	Advanced Actuarial Analytics	
AS 5126	Option Pricing	
AS 5182	Independent Study <sup>3</sup>	
AS 5190	Special Topics in Actuarial Science	
AS 5191	Mentored Research <sup>3</sup>	
AS 5685	Actuarial Internship	
ECON 8001	Microeconomic Analysis	
ECON 8002	Macroeconomic Analysis	
ECON 8009	Econometrics I	
ECON 8129	Time Series Econometrics	
ECON 8139	Panel Data Econometrics	
HCM 5101	Health Systems Organization and Development	
HCM 5103	Financial Management of Healthcare Organizations	
MKTG 5001	Marketing Management/Strategy	
MKTG 5618	Quantitative Pricing and Revenue Analytics	
RMI 5101	Managing Human Capital Risk	

RMI 5102	Retirement Plans
RMI 5104	Managing Property and Liability Risk
RMI 5108	Managing International Risk
STAT 5602	Visualization: The Art of Numbers and the Psychology of Persuasion
STAT 5603	Statistical Learning and Data Mining
STAT 5607	Advanced Business Analytics
STAT 8101	Stochastic Processes
STAT 8108	Applied Multivariate Analysis I
STAT 8114	Survival Analysis I
STAT 8115	Nonparametric Methods
<b>Total Credit Hours</b>	<b>30</b>

## 1

If the student has passed an actuarial exam prior to taking its corresponding course, the course must be waived:

- Passing the ALTAM exam waives AS 5103 Advanced Long-Term Actuarial Modeling.
- Passing the ASTAM exam waives AS 5114 Advanced Short-Term Actuarial Modeling.
- Passing the FAM-L or LTAM exam waives AS 5102 Long-Term Actuarial Modeling.
- Passing the FAM-S or STAM exam waives AS 5104 Short-Term Actuarial Modeling.
- Passing the FM exam waives AS 5101 Theory of Interest.
- Passing the SRM exam waives AS 5108 Actuarial Analytics.

Any waived course is replaced by an elective from the list above. Alternately, students may, on a case-by-case basis, select another course to replace the waived course provided that the course has sufficient academic rigor, is beneficial to the student's career, and is approved by the Academic Director.

## 2

With prior approval from the Academic Director, students may select alternate courses as electives.

## 3

Selection of AS 5182 or AS 5191 requires prior approval from the Academic Director.

**Culminating Event:** Successful completion of coursework is required to earn the MS degree in Actuarial Science.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/actuarial-science-ms-bu-as-ms>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
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215-204-5890  
215-204-7678  
Fax: 215-204-1632

## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

### Academic Co-Directors:

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## Business Administration MBA

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Business Administration.

## About the Program

The Fox School of Business and Management MBA program prepares students to be collaborative leaders in organizations. The updated array of concentrations, including new STEM-certified MBA concentrations, provide learners with in-demand skills in Business Analytics, Finance, and Information Technology Management. We transform students into responsible, professional leaders through engagement with Fox communities, fostering the development of a commitment to lifelong learning, service, and the advancement of management practice.

The Fox MBA is one program available in a variety of completion options to meet the needs of learners:

- The Full-Time MBA is designed for early career professionals who seek career mobility and enhancement. The program is designed to be completed in as little as 17 months.
- The Part-Time MBA is ideal for working professionals looking to advance in their organization or to change careers. The program can be completed with maximum flexibility in a minimum of 17 months, although the average time to completion is three years.
- The Online MBA meets the needs of professionals seeking the rigor of a traditional MBA with the flexibility of online learning. The program can be completed in 24 months and requires only one week-long opening residency in Philadelphia.

**Time Limit for Degree Completion:** Temple University Graduate School guidelines allow for up to six years for completion of the master's degree.

**Campus Location:** Center City, Main, and Online

**Full-Time/Part-Time Status:** The MBA program can be completed on a full- or part-time basis. Registration for 9 credits or more in the Fall and Spring terms constitutes full-time study.

**Interdisciplinary Study:** Students seeking an MBA in a particular discipline complete electives in a specific concentration area. The Fox

MBA offers three STEM-certified concentration areas: Business Analytics, Finance, and Information Technology Management.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The Fox MBA is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Areas of Specialization:** Students work with an academic advisor regarding concentration requirements. Effective Fall 2023, Fox offers three STEM MBA programs. To complete an MBA concentration, 9 to 12 credits of upper-level elective coursework within the discipline are required. Program electives may be combined to complete any one of the concentrations identified below:

- Business Analytics (STEM)
- Finance (STEM)
- Health Sector Management
- Human Resource Management
- Information Systems and Digital Innovation
- Information Technology Management (STEM)
- Innovation Management and Entrepreneurship
- Marketing Management
- Sport Business
- Strategic Management

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides MBA students with career coaching and professional development resources that support student job search. Graduates of the Fox School MBA obtain jobs in a variety of industries, such as consulting, consumer products and services, energy/utilities, operations/logistics, financial services/banking, government, healthcare, industrial products and services, manufacturing, pharmaceuticals, telecommunications, and tourism/transportation.

**Non-Matriculated Student Policy:** Students with an undergraduate GPA of 3.0 or higher may take classes on a non-matriculated basis in the Online or Part-Time MBA programs. Non-matriculated students can take a maximum of 9 credits before being required to matriculate in the program. Students seeking to complete the program as a Full-Time MBA student are required to be matriculated in the program. For more information and an application, contact the Fox Graduate Admissions Office.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to Temple University alumni admitted to the program. The program also offers merit-based scholarships to eligible admitted students. Contact the Fox Graduate Admissions Office for information.

## Admission Requirements and Deadlines

### Application Deadline:

Full-time MBA applicants are admitted Fall term only. Applicants for the Part-Time MBA are admitted in the Fall and Spring terms. Applicants for the Online MBA are admitted in the Fall, Spring and Summer terms.

### Full-Time MBA Fall Admission Only:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

### Part-Time MBA Fall Admission:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

### Part-Time MBA Spring Admission:

- August 1 – Scholarship Deadline
- November 1 – Final Deadline

### Online MBA Fall Admission:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

### Online MBA Spring Admission:

- August 1 – Scholarship Deadline
- November 1 – Final Deadline

### Online MBA Summer Admission:

- February 15 – Scholarship Deadline
- March 31 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis. International students who miss the March 1 deadline for the Full-Time MBA are required to submit to Temple University an evaluation of their transcript(s) by an approved educational evaluation firm.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 1

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Coursework Required for Admission Consideration:** No specific courses are required for admission, but two years of work experience are highly recommended.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal for Full-Time MBA, Part-Time MBA, and Online MBA applicants.

### Standardized Test Scores:

**GMAT/GRE:** Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MBA program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. Admitted students may request a course waiver application at the time of admission. Course waiver requests are reviewed as they are received by the Waiver Committee. The maximum number of credits a student may transfer/waive is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 48, including 36 core course credits and 12 credits of electives that may be combined in an area of concentration, if desired<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
ACCT 5001	Accounting for Managerial and Investment Analysis and Planning <sup>2</sup>	3
BA 5002	Socioeconomic Context of Business	3
BA 5687	Advanced Professional Development Strategies <sup>3</sup>	0
FIN 5001	Financial Analysis and Strategy <sup>2</sup>	3
HRM 5001	Leading Organizations	3
LGLS 5701	Legal and Ethical Foundations of Business	3
MIS 5001	Information Technology Management	3
MKTG 5001	Marketing Management/Strategy	3
MSOM 5001	Operations Management <sup>4</sup>	3
RMI 5051	Managing Risk	3
SGM 5051	Business Strategy in a Global Environment	3
STAT 5001	Quantitative Methods for Business <sup>2,4</sup>	3
<b>Concentration or Electives (see concentration areas below)</b>		<b>12</b>
<b>Capstone Course</b>		
BA 5287	Fox MBA Capstone Experience <sup>5</sup>	3
<b>Total Credit Hours</b>		<b>48</b>

1

To earn the STEM MBA, selection of a STEM-designated concentration is required.

2

ACCT 5001 Accounting for Managerial and Investment Analysis and Planning and STAT 5001 Quantitative Methods for Business are prerequisites that must be satisfactorily completed before FIN 5001 can be taken.

3

BA 5687 Advanced Professional Development Strategies is a requirement for students in the Full-time MBA program.

4

STAT 5001 Quantitative Methods for Business is a prerequisite that must be satisfactorily completed before MSOM 5001 Operations Management can be taken.

5

All core courses must be completed before the student enrolls in BA 5287, the capstone course.

Requirements for each of the 11 MBA concentrations are identified in the following course grids:

## Business Analytics

Code	Title	Credit Hours
STAT 5602	Visualization: The Art of Numbers and the Psychology of Persuasion	3
STAT 5607	Advanced Business Analytics	3
Select two STAT courses from the following:		6
STAT 5603	Statistical Learning and Data Mining	
STAT 5604	Experiments: Knowledge by Design	
STAT 5605	Decision Models: From Data to Decisions	
STAT 5606	Data: Care, Feeding, and Cleaning in Python	
<b>Total Credit Hours</b>		<b>12</b>

## Financial Management

Code	Title	Credit Hours
Select FIN courses totaling 12 credits from the following:		12
FIN 5134	Fintech, Blockchain and Digital Disruption	
FIN 5612	Asset Pricing	
FIN 5613	Derivative Valuation	
FIN 5615	Data Science in Finance	
FIN 5618	Corporate Value Management	
FIN 5623	Risk Measurement	
FIN 5628	Global Economy	
FIN 5632	Investment Management	
FIN 5637	Applied Corporate Finance	
FIN 5638	Behavioral Finance	
FIN 5647	Financial Reporting & Analysis	
FIN 5648	Quantitative Portfolios	
Other FIN courses at the 5000 level or higher <sup>1</sup>		
<b>Total Credit Hours</b>		<b>12</b>

1

Academic Director approval is required.

## Health Sector Management

Code	Title	Credit Hours
HCM 5101	Health Systems Organization and Development <sup>1</sup>	3
HCM 5102	Healthcare Organizational Leadership and Strategy <sup>2</sup>	3
HCM 5103	Financial Management of Healthcare Organizations <sup>3</sup>	3
RMI 5103	Health Risks	3
<b>Total Credit Hours</b>		<b>12</b>

1

HCM 5101 is required to be the first HCM course taken. Alternate course equivalents at 1.5 credits are HCM 5601 The Organizational Structure of the US Health System AND HCM 5602 Market Forces, Regulation and Policy in the US Health System.

2

HCM 5102 is required to be the final HCM course taken. Alternate course equivalents at 1.5 credits are HCM 5603 Population Health Management AND HCM 5651 Healthcare Leadership and Strategy.

3

Alternate course equivalents at 1.5 credits are HCM 5606 Financial Analysis and Managerial Accounting for Healthcare Organizations AND HCM 5607 Corporate Finance and Strategy in Healthcare.

## Human Resource Management

Code	Title	Credit Hours
HRM courses at the 5000 level or higher		9
Business Elective <sup>1</sup>		3
<b>Total Credit Hours</b>		<b>12</b>

1

5000-level business courses that are not required MBA core coursework may be selected as business electives. Students may choose 5000-level elective courses from the different disciplines within the Fox School of Business. Business electives from outside the Fox School must be preapproved by the student's Academic Director.

## Information Systems and Digital Innovation

Code	Title	Credit Hours
MIS 5101	Business Intelligence	3
MIS 5603	Social Media Innovation	3
MIS course at the 5000 level or higher		3
Business Elective <sup>1</sup>		3
<b>Total Credit Hours</b>		<b>12</b>

1

5000-level business courses that are not required MBA core coursework may be selected as business electives. Students may choose 5000-level elective courses from the different disciplines within the Fox School of Business. Business electives from outside the Fox School must be preapproved by the student's Academic Director.

## Information Technology Management

Code	Title	Credit Hours
Select four from the following: <sup>1</sup>		12
<b>Fall</b>		
MIS 5201	IT Audit Process	
MIS 5202	IT Governance	
MIS 5206	Protection of Information Assets	
<b>Spring</b>		
MIS 5203	Systems and Infrastructure Lifecycle Management <sup>1</sup>	
MIS 5205	IT Service Delivery and Support <sup>2</sup>	
MIS 5214	Security Architecture <sup>3</sup>	
<b>Total Credit Hours</b>		<b>12</b>

1

Students are responsible for completing prerequisites for concentration courses.

2

MIS 5201 IT Audit Process is a prerequisite for MIS 5205 IT Service Delivery and Support.

3

MIS 5206 Protection of Information Assets is a prerequisite for MIS 5214 Security Architecture.

## Innovation Management and Entrepreneurship

Code	Title	Credit Hours
SGM 5139	Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas	3
SGM 5142	Business Model Innovation	3
Select one course from the following: <sup>1</sup>		3
SGM 5103	Management of Technology and Innovation	
SGM 5135	Innovation Intelligence: Plan, Build, Protect, and Monetize a Technology / Innovation Portfolio	
SGM 5137	Entrepreneurial Thinking and New Venture Creation	
SGM 5138	Global Innovation Strategy: Creating Agile, Innovative, Globally-Competitive Organizations	
SGM 5144	Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges	
SGM 5145	Plan, Pitch, and Fund an Entrepreneurial Start-Up	
SGM 5148	Open Innovation and Managing Strategic Alliances	
Business Elective <sup>2</sup>		3
<b>Total Credit Hours</b>		<b>12</b>

1

New courses focused on innovation and entrepreneurship may be selected to fulfill this elective requirement. Academic Director approval is required.



2

5000-level business courses that are not required MBA core coursework may be selected as business electives. Students may choose 5000-level elective courses from the different disciplines within the Fox School of Business. Business electives from outside the Fox School must be preapproved by the student's Academic Director.

## Marketing Management

Code	Title	Credit Hours
MKTG courses at the 5000 level or higher		9
Business Elective <sup>1</sup>		3
<b>Total Credit Hours</b>		<b>12</b>

1

5000-level business courses that are not required MBA core coursework may be selected as business electives. Students may choose 5000-level elective courses from the different disciplines within the Fox School of Business. Business electives from outside the Fox School must be preapproved by the student's Academic Director.

## Real Estate

Code	Title	Credit Hours
Select three from the following:		9
LGLS 5103	Real Estate Law and Practice	
RE 5101	Real Estate Finance and Capital Markets	
RE 5102	Enterprise Real Estate Asset Optimization	
RE 5105	Real Estate Valuation and Market Analysis	
Business Elective <sup>1</sup>		3
<b>Total Credit Hours</b>		<b>12</b>

1

5000-level business courses that are not required MBA core coursework may be selected as business electives. Students may choose 5000-level elective courses from the different disciplines within the Fox School of Business. Business electives from outside the Fox School must be preapproved by the student's Academic Director.

## Sport Business

Code	Title	Credit Hours
Select three from the following:		9
SRM 5211	Sport Finance and Economics	
SRM 5212	Legal Issues in Sport and Recreation	
SRM 5226	Consumer Behavior in Sport and Recreation	
SRM 5227	Sport Media and Communication	
SRM 5251	Introduction to Sport Analytics	
SRM 5252	Sport for Development	
SRM 5255	The Sport Workplace	
Business Elective <sup>1</sup>		3
<b>Total Credit Hours</b>		<b>12</b>

1

5000-level business courses that are not required MBA core coursework may be selected as business electives. Students may choose 5000-level elective courses from the different disciplines within the Fox School of Business. Business electives from outside the Fox School must be preapproved by the student's Academic Director.

## Strategic Management

Code	Title	Credit Hours
SGM courses at the 5100 level or higher OR		9
IB courses related to Strategic Management at the IB 5100 level or higher <sup>1</sup>		
Business Elective <sup>2</sup>		3
<b>Total Credit Hours</b>		<b>12</b>

1

Approval is required for the selection of IB courses.

2

5000-level business courses that are not required MBA core coursework may be selected as business electives. Students may choose 5000-level elective courses from the different disciplines within the Fox School of Business. Business electives from outside the Fox School must be preapproved by the student's Academic Director.

### Additional Requirements:

MBA candidates are required to complete three academic development and three professional development workshops. Workshops are delivered through a variety of modalities to meet various scheduling needs. Workshops change each academic term based on availability. Student participation is tracked electronically. Students are not permitted to register for their capstone course unless all professional development requirements have been met.

### For Full-Time MBA Students:

Full-time MBA candidates are required to complete a non-credit internship in the summer between their first and second year of study to better prepare them for the post-MBA job market. The internship exposes students to opportunities in their area of interest while expanding their professional networks. Internships are expected to be a minimum of 400 hours and should not exceed 1,000 hours during the Full-time MBA program of study.

### For Online MBA Students:

Online MBA candidates are required to participate in a five-day opening residency that can be completed in person or online, depending on the time of year. Residency includes networking, professional development and the first course of the program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-mba-bu-ba-mba>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122

foxinfo@temple.edu  
 215-204-5890  
 215-204-7678  
 Fax: 215-204-1632

## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

### Admissions:

Fox Graduate Admissions Office  
 foxinfo@temple.edu  
 215-204-5890

### Academic Director:

Alex Stein  
 astein@temple.edu  
 215-348-4356

### Director, Graduate Programs:

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 215-204-1037

### Executive Director, Graduate Programs:

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 215-204-7678

### Vice Dean, Graduate and International Programs:

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 ckiely@temple.edu  
 215-204-7678

## Business Administration/ Accounting PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

## About the Program

The PhD in Business Administration program, with a concentration in Accounting, prepares individuals for advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in Accounting, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

Number of Credits Required to Earn the Degree: 48

Required Courses:<sup>1</sup>

Code	Title	Credit Hours
<b>Core Accounting Seminars</b> <sup>2</sup>		
	Math Preparation (August) non-credit	0
ACCT 9001	Interdisciplinary Accounting Research	3
ACCT 9002	Seminar in Financial Accounting Theory	3
ACCT 9011	Proseminar in Accounting	3
<b>Theory and Research Methods Courses</b>		
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9106	Business Econometrics II	3
BA 9108	Capital Markets Research	3
STAT 8112	Statistical Methods for Business Research I	3
<b>Electives</b>		
	Select six from the following: <sup>3</sup>	18
BA 9101	Getting Your Hands Dirty: The Craft of Data Management and Analysis	
BA 9104	Game Theory	
BA 9205	Information Economics	
BA 9209	Business Econometrics III	
MKTG 9006	Empirical Modeling in Marketing	
STAT 8108	Applied Multivariate Analysis I	
STAT 8113	Statistical Methods for Business Research II	
<b>Research Courses</b> <sup>4</sup>		
		6
BA 9994	Preliminary Examination Preparation	
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

With approval from the Concentration Director, students may repeat the ACCT 9011 proseminar or other Accounting concentration seminars in lieu of electives.

3

With approval from the Concentration Director, students may take other electives to match their research interests.

4

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

**Culminating Events:** A committed student can complete a PhD in Accounting in five years:

- Complete coursework in Accounting, Economics, Finance and Statistics in the first two and a half years.
- Take the competency exam in Economics and Statistics at the end of the first year.
- Present two research papers, typically in collaboration with one or more faculty, in the second and third years, later extending research presentations to national and international conferences.
- Take the Accounting PhD comprehensive exam at the end of the third year.
- Work on dissertation, revise and submit research papers to journals, and develop teaching skills during the fourth and fifth years.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-phd-bu-ba-phd>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

#### Admissions:

Fox PhD Admissions  
foxphdo@temple.edu

#### Concentration Director:

Dr. Jagan Krishnan  
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krish@temple.edu  
215-204-8126

#### PhD Managing Director:

Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

## Business Administration/ Entrepreneurship PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

# Business Administration/Finance PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

## About the Program

The PhD in Business Administration program, with a concentration in Finance, prepares students for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in Finance, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:<sup>1</sup>*

Code	Title	Credit Hours
<b>Core Courses</b>		
	Math Preparation (August) non-credit	0
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9106	Business Econometrics II	3
BA 9108	Capital Markets Research	3
BA 9203	Financial Economics	3
BA 9209	Business Econometrics III	3
STAT 8112	Statistical Methods for Business Research I	3
<b>Core Finance Seminars</b>		
FIN 9001	Corp Finance Theory	3
FIN 9002	Empirical Research in Corporate Finance	3
FIN 9005	Empirical Asset Pricing	3
FIN 9011	Proseminar in Finance	3
<b>Electives<sup>2</sup></b>		<b>9</b>
BA 9104	Game Theory	
BA 9205	Information Economics	
BA 9212	Seminar in Global Finance and Governance	
	or FIN 9004 Seminar in Global Finance and Governance	
<b>Research Courses<sup>3</sup></b>		<b>6</b>
BA 9994	Preliminary Examination Preparation	
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. Recommended electives include BA 9205 and BA 9212 or FIN 9004. With approval from the Concentration Director, students may take other electives to match their research interests.

3

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

**Culminating Events:** A committed student can complete the Finance PhD in five years by adhering to the following schedule:

- Complete coursework in Economics, Finance and Statistics in the first two and a half years.
- Take the competency exam in Economics and Statistics at the end of the first year. See details in "Statistics Competency Examination" below.
- Complete and present two research papers at the end of the first and second year. See details under "Research Paper and Presentation Requirements" below.
- Take the Finance PhD comprehensive exam in the third year. See details for the "Comprehensive Examination" below.
- Work on dissertation, revise and submit research papers to conferences and journals, and develop teaching skills during the fourth and fifth years.

*Statistics Competency Examination:*

An assessment of proficiency in statistical theory and methodology is made at the end of the first year in the program. Students who fail the Statistics competency exam on the first attempt must sit for reexamination prior to the Fall term of their second year. A second failure results in dismissal from the program. No third attempt is permitted.

*Research Paper and Presentation Requirements:*

PhD students in Finance are required to complete a first-year research proposal by the end of September in the second year. They must also complete a research paper in their second year. The deadline for presentation of papers at the Finance Department's internal seminar is Fall of the third year. After each presentation, a committee of Finance faculty evaluate whether the student has completed the paper and presentation requirement with satisfaction.

*Comprehensive Examination:*

PhD students in Finance are required to pass a comprehensive exam in February of the third year. The exam is designed to test whether the student has a comprehensive and integrative understanding of the theories, methodologies and empirical findings in the field of finance. It primarily focuses on the knowledge gained in the concentration seminars and theory courses, although other pertinent materials may also be included in the comprehensive exam.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-phd-bu-ba-phd>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Admissions:*

Fox PhD Admissions  
foxphdo@temple.edu

*Concentration Director:*

Dr. Connie X. Mao  
416 Alter Hall  
cmao@temple.edu  
215-204-4895

*PhD Managing Director:*

Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

## Business Administration/Human Resource Management and Organizational Behavior PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

### About the Program

The PhD in Business Administration program, with a concentration in Human Resource Management and Organizational Behavior, engages the student in advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in Human Resource Management and Organizational

Behavior, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0

- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
<b>Core HR Management and Organizational Behavior Seminars</b>		
HRM 9001	Managing Human Resources	3
HRM 9005	Seminar in Functional Human Resource Management	3
HRM 9006	Doctoral Seminar in Meta-analysis and Research Synthesis Methods	3
HRM 9011	Pro-Seminar in Human Resource Management and Organization Behavior <sup>2</sup>	3
HRM 9021	Current Readings in Human Resource Management and Organizational Behavior	3
<b>Theory and Research Methods Courses</b>		
BA 9001	Organizations and Management Theory	3
BA 9002	Scientific Inquiry-Management Research	3
BA 9003	Seminar in Organizational Behavior	3
BA 9207	Quantitative Research Methods II	3
BA 9208	Quantitative Research Methods III	3
PSY 8011	Graduate Statistics I	3
STAT 8112	Statistical Methods for Business Research I	3
	Any other methods course <sup>3</sup>	3
<b>Elective</b>		
	Select one from the following: <sup>4</sup>	3
BA 9183	Directed Study in Business	
MKTG 9005	Seminar in Judgment and Decision Making	
<b>Research Courses</b> <sup>5</sup>		<b>6</b>
BA 9994	Preliminary Examination Preparation	
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

Students take HRM 9011 for a minimum of three credits, but may elect to take it for a total of six credits. Those who choose to complete the course for only three credits must substitute a three-credit elective for the remaining credits of HRM 9011.

3

Course selection must be approved by the Concentration Director.

4

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. With approval from the Concentration Director, students may substitute another content/theory course that is relevant to their research program.

5

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

**Culminating Events:** Students are expected to complete formal coursework within five academic terms. They then spend the remainder of the program working toward successful completion of these programmatic milestones:

- A first- and second-year research paper
- A comprehensive examination requirement
- A dissertation proposal and defense
- A final dissertation and defense

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-phd-bu-ba-phd>

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215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Admissions:*  
Fox PhD Admissions  
foxphdo@temple.edu

*Concentration Director:*  
Dr. Brian Holtz  
342 Alter Hall  
tue84905@temple.edu  
215-204-6871

*PhD Managing Director:*  
Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

## Business Administration/ Interdisciplinary Study PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Business Administration/ International Business Administration PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

### About the Program

The PhD in Business Administration program, with a concentration in International Business Administration, prepares individuals for advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in International Business Administration, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

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APPLY ONLINE to this Fox graduate program.

**Letters of Reference:**

Number Required: 2

**From Whom:** Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

#### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

Number of Credits Required to Earn the Degree: 48

Required Courses:<sup>1</sup>

Code	Title	Credit Hours
<b>Core Courses</b>		
	Math Preparation (August) non-credit	0
BA 9001	Organizations and Management Theory	3
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9106	Business Econometrics II or ECON 8139 Panel Data Econometrics	3
SGM 9003	Seminar: Management Control	3
STAT 8112	Statistical Methods for Business Research I	3
<b>Core International Business Administration Seminars</b>		
BA 9212/ FIN 9004	Seminar in Global Finance and Governance	3
IB 9001	Theory-Int Bus & Mltinat	3

IB 9002	Empirical Research in International Business	3
SGM 9001	Seminar: Strategic Form - Environmental Analysis	3

### Electives

Select four from the following:<sup>2</sup> 12

BA 9101	Getting Your Hands Dirty: The Craft of Data Management and Analysis	
BA 9209	Business Econometrics III	
FIN 9002	Empirical Research in Corporate Finance	
HRM 9006	Doctoral Seminar in Meta-analysis and Research Synthesis Methods	
SGM 9211	Theor Fndns in Entrepr	
SGM 9212	Strategic Management of Technology and Innovation	

### Research Courses<sup>3</sup> 6

BA 9994	Preliminary Examination Preparation	
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	

### Total Credit Hours 48

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. With approval from the Concentration Director, students may take other electives to match their research interests.

3

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

**Additional Requirements:** Students in the International Business Administration concentration are also required to take:

- a minor in one business functional area (e.g., Finance, Marketing, Strategy), and
- one or two generic functional courses in the business functional area after consultation with the Concentration Director.

**Culminating Events:** Students are expected to complete formal coursework within four academic terms. Additional benchmarks include:

- Take the qualifying exam in Statistics after the first year.
- Prepare the first-year research proposal by the end of the first year's Summer term.
- Complete the second-year paper requirement by the end of the second year's Summer term.
- Take the comprehensive exam in International Business Administration after all coursework is completed.
- Write and defend the dissertation proposal.
- Write and defend the final dissertation.



## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-phd-ba-phd>

### Department Information:

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701 Alter Hall (006-22)  
Philadelphia, PA 19122-6083  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Admissions:*  
Fox PhD Admissions  
foxphdo@temple.edu

*Concentration Director:*  
Dr. J. Jay Choi  
jay.choi@temple.edu  
215-204-5084

*PhD Managing Director:*  
Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

## Business Administration/ Management Information Systems PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

### About the Program

The PhD in Business Administration program, with a concentration in Management Information Systems (MIS), prepares the student for advanced research and scholarship. The primary emphasis of our program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in MIS, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0

- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
<b>Core Management Information Systems Seminars</b>		
	Math Preparation (August) non-credit	0
MIS 9002	Inf Sys Found & Theory	3
MIS 9003	Foundations of Electronic Commerce Research	3
MIS 9004	Adv Research Methods-IS	3
MIS 9011	Proseminar in Management Information Systems	3
<b>Theory and Research Methods Courses</b>		
BA 9002	Scientific Inquiry-Management Research	3
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9106	Business Econometrics II	3
or BA 9207	Quantitative Research Methods II	
BA 9208	Quantitative Research Methods III	3
or BA 9209	Business Econometrics III	
STAT 8112	Statistical Methods for Business Research I	3
STAT 8113	Statistical Methods for Business Research II	3
<b>Electives</b> <sup>2</sup>		<b>9</b>
BA 9001	Organizations and Management Theory	
BA 9104	Game Theory	
BA 9205	Information Economics	
<b>Research Courses</b> <sup>3</sup>		<b>6</b>
BA 9994	Preliminary Examination Preparation	
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. Recommended electives include BA 9001, BA 9104, and BA 9205. With approval from the Concentration Director, students may take other electives to match their research interests.

3

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

**Culminating Events:** Students are expected to complete formal coursework within four academic terms. Additional benchmarks include:

- Take the qualifying exam in Statistics after the first year.
- Prepare the first-year research proposal by the end of the first year's Summer term.
- Complete the second-year paper requirement by the end of the second year's Summer term.
- Take the MIS preliminary exam by the end of the second year's Summer term. The purpose of the exam is to demonstrate critical and interpretive knowledge of current research in subject areas determined, in advance, by department faculty.
- Write and defend the dissertation proposal, which demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem; an exhaustive survey and review of literature related to the problem; and a detailed methodological plan for investigating the problem.
- Write and defend the final dissertation, which is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standard of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-phd-bu-ba-phd>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
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Philadelphia, PA 19122-6083  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

**Admissions:**  
Fox PhD Admissions  
foxphdo@temple.edu

**Concentration Director:**  
Dr. Jason Thatcher  
206C Speakman Hall  
jason.thatcher@temple.edu

**PhD Managing Director:**  
Dr. Crystal Harold

crystal.harold@temple.edu  
215-204-2425

# Business Administration/ Marketing PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

## About the Program

The PhD in Business Administration program, with a concentration in Marketing, prepares individuals for advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in Marketing, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:<sup>1</sup>*

Code	Title	Credit Hours
<b>Core Courses</b>		
	Math Preparation (August) non-credit	0
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9207	Quantitative Research Methods II	3
or BA 9101	Getting Your Hands Dirty: The Craft of Data Management and Analysis	
BA 9208	Quantitative Research Methods III	3
or BA 9209	Business Econometrics III	
STAT 8112	Statistical Methods for Business Research I	3
STAT 8113	Statistical Methods for Business Research II	3
or BA 9106	Business Econometrics II	
<b>Core Marketing Seminars</b>		
MKTG 9001	Behavioral Science Seminar	3
MKTG 9002	Seminar on Behavioral Research in Marketing	3
MKTG 9003	Sem-Quant Research-Mktg	3
MKTG 9006	Empirical Modeling in Marketing	3
MKTG 9011	Proseminar in Marketing	3
<b>Electives</b>		
Select three from the following: <sup>2</sup>		9
BA 9001	Organizations and Management Theory	

BA 9002	Scientific Inquiry-Management Research	
BA 9003	Seminar in Organizational Behavior	
BA 9104	Game Theory	
BA 9106	Business Econometrics II	
EPSY 8627	Introduction to Research Design and Methods	
HRM 9006	Doctoral Seminar in Meta-analysis and Research Synthesis Methods	
MKTG 9005	Seminar in Judgment and Decision Making	
<b>Research Courses</b> <sup>3</sup>		<b>6</b>
BA 9994	Preliminary Examination Preparation	
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. With approval from the Concentration Director, students may take relevant coursework in quantitative methods, Psychology or Sociology to match their research interests.

3

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

**Additional Requirements:** A screening examination is required after completion of the first year of coursework. In addition, two research papers are required:

- The first research paper is written at the end of the first year of study. The objective is to demonstrate progress in developing research capabilities. The student is expected to show initiative in proposing a research idea and developing a research approach. In May, students present a preliminary version of the paper, receive faculty feedback, and then formally submit and present the paper in the Fall term of the second year.
- The second research paper is prepared following completion of the second year of study. The objective is to demonstrate research capability. This paper may be based on the first-year research paper and includes research motivation; literature review; conceptual model with research hypotheses; description of methodology, including operationalization of variables and research design; analysis; discussion of results; and specific contributions and implications for theory and practice.

In May of the second year, students present a preliminary version of the research paper, receive faculty feedback, and then formally submit and present the paper at the beginning of the Fall term of the third year. The second-year research paper, which should be publishable in a high-quality academic journal, must be successfully passed before the student can take the comprehensive exam.

#### Culminating Events:

#### *Comprehensive Examination:*

The purpose of the comprehensive examination is to demonstrate critical and interpretive knowledge of current research. The subject areas are determined, in advance, by the faculty of the department. The comprehensive exam should be completed no more than one term after the student completes the coursework component of the program. Students who are preparing to write their comprehensive examination should confirm a time and date with their departmental advisor.

Members of the student's department write the questions for the comprehensive exam. The student must answer every question on the examination in order to be evaluated by the Department Committee. The evaluators look for a breadth and depth of understanding of specific research areas, a critical application of that knowledge to specific phenomena, and an ability to write technical prose. Each member votes to pass or fail the student. In order to pass, a majority of the committee members must agree that the exam has been satisfactorily completed.

#### *Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the following:

- the context and background surrounding a particular research problem;
- an exhaustive survey and review of literature related to the problem; and
- a detailed methodological plan for investigating the problem.

The proposal should be completed and approved no more than one year after completing coursework. Upon approval, a timeline for completing the investigation and writing process is established.

#### *Dissertation:*

The doctoral dissertation is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standard of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the student's department. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation. This committee is comprised of the Doctoral Advisory Committee and at least one additional faculty member from outside the department.

If any member decides to withdraw from the committee, the student shall notify the Chair of the Dissertation Examining Committee and the PhD Managing Director. The student is responsible for finding a replacement, in consultation with the Chair. Inability to find a replacement shall constitute evidence that the student is unable to complete the

dissertation. In such a case, the student may petition the PhD Managing Director for a review. Once review of the facts and circumstances is completed, the Director will rule on the student's progress. If the Director rules that the student is not capable of completing the dissertation, the student will be dismissed from the program. This decision may be appealed to the Senior Associate Dean. If dismissed, the student may appeal to the Graduate School.

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## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-phd-bu-ba-phd>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122-6083  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Admissions:*  
Fox PhD Admissions  
foxphdo@temple.edu

*Concentration Director:*  
Dr. Monica Wadhwa  
monica.wadhwa@temple.edu  
215-204-5051

*PhD Managing Director:*  
Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

# Business Administration/ Operations and Supply Chain Management PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

## About the Program

The PhD in Business Administration program, with a concentration in Operations and Supply Chain Management, prepares individuals for advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in Operations and Supply Chain Management, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

**Standardized Test Scores:**

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

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- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
<b>Core Operations and Supply Chain Management Seminars</b>		
	Math Preparation (August) non-credit	0
MSOM 9101	Continuous and Nonlinear Optimization Methods	3
MSOM 9102	Linear and Discrete Optimization	3
<b>Theory and Research Methods Courses</b>		
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9106	Business Econometrics II	3
STAT 8101	Stochastic Processes	3
STAT 8112	Statistical Methods for Business Research I	3
STAT 8113	Statistical Methods for Business Research II	3
<b>Electives</b>		
	Select six from the following: <sup>2</sup>	18
BA 9001	Organizations and Management Theory	
BA 9104	Game Theory	
BA 9202	Qualitative Research Methods	
BA 9205	Information Economics	
BA 9207	Quantitative Research Methods II	
BA 9208	Quantitative Research Methods III	
BA 9209	Business Econometrics III	

MIS 9004	Adv Research Methods-IS
MIS 9011	Proseminar in Management Information Systems
MKTG 9003	Sem-Quant Research-Mktg
MKTG 9005	Seminar in Judgment and Decision Making
MKTG 9080	Special Topics in Quantitative Marketing
MSOM 9105	Fundamentals of Supply Chain and Operations Management Theory
MSOM 9106	Dynamic Programming: Theory and Its Applications

**Research Courses**<sup>3</sup> **6**

BA 9994	Preliminary Examination Preparation
BA 9998	Pre-Dissertation Research
BA 9999	Dissertation Research

**Total Credit Hours** **48**

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. With approval from the Concentration Director, students may take other electives to match their research interests.

3

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**Culminating Events:**

**Comprehensive Examination:**

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**Proposal:**

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the following:

- the context and background surrounding a particular research problem;
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**Dissertation:**

The doctoral dissertation is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standard of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

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215-204-7678  
Fax: 215-204-1632

**Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

**Department Contacts:****Admissions:**

Fox PhD Admissions  
foxphdo@temple.edu

**Concentration Director:**

Dr. Subodha Kumar  
530 Alter Hall  
subodha@temple.edu  
215-204-5919

**PhD Managing Director:**

Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

# Business Administration/Risk Management and Insurance PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

## About the Program

The PhD in Business Administration program, with a concentration in Risk Management and Insurance, prepares individuals for advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in Risk Management and Insurance, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university

or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

**Standardized Test Scores:**

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

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- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:<sup>1</sup>*

Code	Title	Credit Hours
<b>Core Risk Management Seminars</b>		
	Math Preparation (August) non-credit	0
RMI 9001	Corporate Risk Management	3
RMI 9002	Household Finance and Risk Management	3
RMI 9003	Theory of Risk and Uncertainty	3
<b>Theory and Research Methods Courses</b>		
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9106	Business Econometrics II	3
BA 9203	Financial Economics	3
BA 9205	Information Economics	3
BA 9209	Business Econometrics III	3
FIN 9001	Corp Finance Theory	3
STAT 8112	Statistical Methods for Business Research I	3
<b>Electives</b>		
Select three from the following: <sup>2</sup>		9
BA 9104	Game Theory <sup>3</sup>	
BA 9108	Capital Markets Research <sup>4</sup>	
ECON 8106	Microeconomic Theory II <sup>5</sup>	
Any ECON 8000-level course <sup>5</sup>		
FIN 9002	Empirical Research in Corporate Finance <sup>4</sup>	
FIN 9005	Empirical Asset Pricing <sup>4</sup>	



Any Finance Theory 9000-level course<sup>3</sup>

STAT 8113 Statistical Methods for Business Research II

**Research Courses<sup>6</sup>** **6**

BA 9994 Preliminary Examination Preparation

BA 9998 Pre-Dissertation Research

BA 9999 Dissertation Research

**Total Credit Hours** **48**

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. With approval from the Concentration Director, students may take other electives to match their research interests. Suggested focus areas and courses may be chosen with approval from the Concentration Director.

3

This is a theory-focused course.

4

This is a finance-focused course.

5

This is an economics-focused course.

6

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

### **Culminating Events:**

#### *Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge of current research. The subject areas are determined, in advance, by the faculty of the department. The preliminary exam should be completed no more than one term after the student completes the coursework component of the program. Students who are preparing to write their preliminary examinations should confirm a time and date with their departmental advisor.

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The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the following:

- the context and background surrounding a particular research problem;

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The doctoral dissertation is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standard of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

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## Contacts

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foxphdo@temple.edu

*Concentration Director:*  
Dr. Randy E. Dumm  
610 Alter Hall  
randy.dumm@temple.edu  
215-204-6030

*PhD Managing Director:*  
Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

## Business Administration/ Strategic Management PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

### About the Program

The PhD in Business Administration program, with a concentration in Strategic Management, engages the student in advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Accreditation:** The PhD in Business Administration program, with a concentration in Strategic Management, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers who will work in academic positions.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

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*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0

- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
<b>Core Courses</b>		
	Math Preparation (August) non-credit	0
BA 9001	Organizations and Management Theory	3
BA 9101	Getting Your Hands Dirty: The Craft of Data Management and Analysis	3
BA 9103	Econ Theory of Choice	3
BA 9105	Business Econometrics I	3
BA 9106	Business Econometrics II	3
	or ECON 8139 Panel Data Econometrics	
STAT 8112	Statistical Methods for Business Research I	3
<b>Core Strategic Management Seminars</b>		
SGM 9001	Seminar: Strategic Form - Environmental Analysis	3
SGM 9003	Seminar: Management Control	3
SGM 9211	Theor Fndns in Entrepr	3
<b>Electives</b>		
	Select five from the following: <sup>2</sup>	15
BA 9003	Seminar in Organizational Behavior	
BA 9202	Qualitative Research Methods	
BA 9207	Quantitative Research Methods II	
BA 9209	Business Econometrics III	
BA 9212	Seminar in Global Finance and Governance	
	or FIN 9004 Seminar in Global Finance and Governance	
HRM 9006	Doctoral Seminar in Meta-analysis and Research Synthesis Methods	
IB 9001	Theory-Int Bus & Mltinat	
IB 9002	Empirical Research in International Business	
MIS 9011	Proseminar in Management Information Systems	
SGM 9011	Proseminar in Strategy and International Business	
SGM 9212	Strategic Management of Technology and Innovation	
<b>Research Courses</b> <sup>3</sup>		
BA 9994	Preliminary Examination Preparation	6
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. With approval from the Concentration Director, students may take other electives to match their research interests.

3

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

### Additional Requirements:

#### *Statistics Competency Examination:*

An assessment of proficiency in statistical theory and methodology is made at the end of the first year in the program. Students who fail the Statistics competency exam on the first attempt must sit for reexamination prior to the Fall term of their second year. A second failure results in dismissal from the program. No third attempt is permitted.

#### *Teaching Experience:*

Students are required to teach for at least one term.

### Culminating Events:

#### *Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge of current research. The subject areas are determined, in advance, by the faculty of the department. The preliminary exam should be completed no more than one term after the student completes the coursework component of the program. Students who are preparing to write their preliminary examinations should confirm a time and date with their departmental advisor.

The members of the student's department write the questions for the preliminary exam. The student must answer every question on the examination in order to be evaluated by the Department Committee. The evaluators look for a breadth and depth of understanding of specific research areas, a critical application of that knowledge to specific phenomena, and an ability to write technical prose. Each member votes to pass or fail the student. In order to pass, a majority of the committee members must agree that the exam has been satisfactorily completed.

#### *Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem, an exhaustive survey and review of literature related to the problem, and a detailed methodological plan for investigating the problem.

The proposal should be completed and approved no more than one year after completing coursework. Upon approval, a timeline for completing the investigation and writing process is established.

#### *Dissertation:*

The doctoral dissertation is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standard of the field; demonstrate an understanding of the relationship between

the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the student's department. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation. This committee is comprised of the Doctoral Advisory Committee and at least one additional faculty member from outside the department.

If any member decides to withdraw from the committee, the student shall notify the Chair of the Dissertation Examining Committee and the PhD Managing Director. The student is responsible for finding a replacement, in consultation with the Chair. Inability to find a replacement shall constitute evidence that the student is unable to complete the dissertation. In such a case, the student may petition the PhD Managing Director for a review. Once review of the facts and circumstances is completed, the Director will rule on the student's progress. If the Director rules that the student is not capable of completing the dissertation, the student will be dismissed from the program. This decision may be appealed to the Senior Associate Dean. If dismissed, the student may appeal to the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Secretary at least 15 days before the defense is to be scheduled. The Graduate Secretary arranges the time, date and room within two working days, and forwards to the student the appropriate forms. After the Graduate Secretary has scheduled the defense, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense. The department posts flyers announcing the defense, and the Graduate School announces the defense on its website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-administration-phd-bu-ba-phd>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

### Admissions:

Fox PhD Admissions  
foxphdo@temple.edu

### Concentration Director:

Dr. Arvind Parkhe  
561 Alter Hall  
aparkhe@temple.edu  
215-204-6618

### PhD Managing Director:

Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

# Business Administration/Tourism and Sport PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Business Administration.

## About the Program

The PhD in Business Administration program, with a concentration in Tourism and Sport, prepares individuals for advanced research and scholarship. The primary emphasis of the program is to prepare future faculty members for successful academic careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Affiliation(s):** The Tourism and Sport faculty are conducting research for the following agencies: Commonwealth of Pennsylvania, Greater Philadelphia Tourism Marketing Corporation, Greater Reading (PA) Convention and Visitors Bureau, Office of Travel and Tourism Industries, and Special Olympics of North America.

**Accreditation:** The PhD in Business Administration program, with a concentration in Tourism and Sport, is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program is primarily dedicated to preparing well-trained PhD graduates for faculty positions at universities that offer hospitality, recreation, sport and tourism degrees.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications, and other competitive considerations. Students may also

receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

Fall:

Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

Number Required: 2

From Whom: Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

Number of Credits Required to Earn the Degree: 48

Required Courses:<sup>1</sup>

Code	Title	Credit Hours
<b>Core Tourism and Sport Courses</b>		
	Math Preparation (August) non-credit	0
STHM 9001	Research Seminar	3
STHM 9002	Seminar in Theory Development: Tourism and Sport Concepts	3
STHM 9090	Special Topics in Tourism and Sport (2 terms)	3
<b>Theory and Research Methods Courses<sup>2</sup></b>		<b>27</b>
Theoretical Foundations Courses		
Select a minimum of four courses (12 credits) from the following:		
BA 9001	Organizations and Management Theory	
BA 9002	Scientific Inquiry-Management Research	
BA 9003	Seminar in Organizational Behavior	
BA 9812	Innovation and Entrepreneurship in the New Economy	
HRM 9011	Pro-Seminar in Human Resource Management and Organization Behavior	
HRM 9021	Current Readings in Human Resource Management and Organizational Behavior	
MIS 9011	Proseminar in Management Information Systems	
MKTG 9001	Behavioral Science Seminar	
MKTG 9002	Seminar on Behavioral Research in Marketing	
MKTG 9005	Seminar in Judgment and Decision Making	
Methodological Foundations Courses		
Select a minimum of three courses (9 credits) from the following:		
BA 9002	Scientific Inquiry-Management Research	
BA 9105	Business Econometrics I	
BA 9106	Business Econometrics II	
BA 9201	Quant Methods in Bus Res	
BA 9202	Qualitative Research Methods	
HRM 9006	Doctoral Seminar in Meta-analysis and Research Synthesis Methods	
STAT 8108	Applied Multivariate Analysis I	
STAT 8112	Statistical Methods for Business Research I	
STAT 8113	Statistical Methods for Business Research II	
<b>Electives<sup>3</sup></b>		<b>6</b>
STHM 9482	Independent Study	
STHM 9982	Independent Research	
<b>Research Courses<sup>4</sup></b>		<b>6</b>
BA 9994	Preliminary Examination Preparation	
BA 9998	Pre-Dissertation Research	
BA 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Students require approval from their mentor and the Concentration Director for all course selections, including those dropped and/or added.

2

The program of study may be individualized to a significant degree for the student's best professional and scholarly development. Students and their mentor work together to ensure students take coursework to match their research interests. Courses may be chosen from departments other than those listed with the approval of the Concentration Director and the Business Administration PhD Program Director. Potential courses are offered in such programs as Accounting, Entrepreneurship, Finance, International Business, Risk Management and Insurance, and Strategic Management.

3

Recommended courses include STHM 9482 and STHM 9982. With approval from the Concentration Director, students may take other electives to match their research interests.

4

Of the 6 required research credits, a minimum of 2 credits of BA 9999 must be taken. The other 4 credits may be taken in any combination of BA 9994, BA 9998, and BA 9999. Given that 6 credits constitute the minimum requirement, additional credits may be needed to fulfill the degree program's culminating experiences. Doctoral students must maintain continuous enrollment from matriculation to graduation.

#### **Culminating Events:**

##### *Screening Examination:*

The screening exam ensures a student is making sufficient progress in theoretical and methodological development in the first year of study. A student must pass the screening exam in order to advance to the second year of the PhD program.

##### *Preliminary Examination:*

The preliminary exam is designed to test whether the student has a comprehensive and integrated understanding of the theories, methodologies and empirical findings in Tourism and Sport. Within six months of completing the required coursework, students must take and pass a preliminary examination. A Preliminary Examination Committee is formed based on the PhD-level Tourism and Sport courses and related cognate area of specialization that a student has taken. Students are encouraged to take the preliminary examination in the first academic term of the third year. Students who fail are allowed to sit for re-examination. A second failure results in automatic dismissal from the program. Third attempts are not allowed.

The preliminary exam for the Tourism and Sport concentration is formatted with four sections: Methodology, Primary Theory Area, Cognate Research, and Field/Discipline/Application. Written by members of the committee, the questions reflect an expectation that students are familiar with the broad base of the specific domain in Tourism and Sport and specific topics chosen by the committee.

##### *Dissertation Proposal and Defense:*

Within three months of successfully passing the preliminary examination, students are expected to select a dissertation advisor and their Dissertation Advisory Committee. Students must notify the Tourism and Sport Concentration Advisor of their choice for advisor and committee members prior to the proposal defense date.

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem, an exhaustive survey and review of literature related to the problem, and a detailed methodological plan for investigating the problem.

The proposal should be completed and approved no more than one year after completing coursework. Upon approval, a timeline for completing the investigation and writing process is established.

A Dissertation Advisory Committee must have a minimum of three faculty members, including a chairperson. The chairperson and at least one other member must be faculty from the Tourism and Sport concentration. One member may be from outside the concentration, and this is encouraged. The chairperson must be a member of the Temple University Graduate Faculty and must be approved by the Concentration Advisor and Fox PhD office. Students are encouraged to formally defend the proposal with the Dissertation Proposal Committee's approval no later than the end of summer of the third year.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/business-administration-phd-bu-ba-phd>

### **Department Information:**

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### **Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

### **Department Contacts:**

#### *Admissions:*

Fox PhD Admissions  
foxphdo@temple.edu

#### *Concentration Director:*

Dr. Chihyung Michael Ok  
331 Speakman Hall  
michael.ok@temple.edu  
215-204-0361

#### *PhD Managing Director:*

Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

## **Business Administration Executive Program MBA**

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Business Administration Executive Program.

## About the Program

The Fox School of Business and Management offers MBA programs that help develop a solid understanding of business models created by the synergistic forces of globalization, entrepreneurship and information technology. Our approach to graduate education helps develop practical expertise through case analyses, presentations, interaction with business practitioners, and team projects. The Fox School prepares students to step immediately into key management roles in highly specialized fields.

**Time Limit for Degree Completion:** The Executive MBA program is delivered in cohorts and designed to be completed in 16 months, but students may take up to 6 years to complete the degree.

**Campus Location:** The Executive MBA is delivered through required in-person classes on weekends (Friday through Sunday), with additional online components. Class weekends are held in the Executive Education Suite in 1810 Liacouras Walk, part of the Fox School of Business on Temple University's main campus.

**Full-Time/Part-Time Status:** Executive MBA students are considered full-time students.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Study Abroad:** A required one-week international trip is arranged for students in the Philadelphia Executive MBA program.

**Accreditation:** The Executive MBA program is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Areas of Specialization:** The Executive MBA program is designed to mirror a real work environment with students assigned to teams. Students work extensively in these teams to prepare assignments and presentations. Support is given by the faculty on how to manage a successful team environment.

**Job Prospects:** Graduates of the Fox School obtain jobs in computer/information technology, consulting, consumer products and services, energy/utilities, financial services/banking, government, healthcare, industrial products and services, manufacturing, pharmaceuticals, telecommunications and tourism/transportation.

**Non-Matriculated Student Policy:** Executive MBA courses may not be taken on a non-matriculated basis.

**Financing Opportunities:** Tuition includes books, lodging, most meals during the required class weekends, and the one-week required international trip. Students are responsible for travel to and from in-person class weekends, and the round-trip airline ticket associated with the international trip. Fox School Executive MBA students may be considered for merit-based scholarships. The Fox School offers 5% tuition scholarships for all Temple alumni who are admitted to the program. No additional forms, application essays or recommendations are required. Citizens and permanent residents of the United States are eligible for federal financial aid opportunities. Alternative loans through private lenders may also be available as well as a payment plan through Temple's Bursar's Office. Students are responsible for the total cost of the program.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Coursework Required for Admission Consideration:** Although no specific courses are required for admission consideration, applicants to the Executive MBA program are expected to have approximately 10 years of experience, with 5 to 7 years of managerial experience.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### Standardized Test Scores:

GMAT/GRE: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** If an interview is scheduled, on-site interviews are strongly recommended so that applicants can visit Temple University and the Fox School to tour the facilities and meet the Executive MBA faculty. Interviews may also be conducted via video conference.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 48, all of which must be completed at Temple University

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
ACCT 5801	Fin Info Reporting & Analysis	3
BA 5801	Industrial Organization and Corporate Strategy	3
BA 5851	Strategy Formulation and Administration	3
FIN 5802	Enterprise Financial Management	3
HRM 5802	Leading and Managing Teams and Individuals	3
LGLS 5801	Law and Ethics in the Business Enterprise	3
MIS 5801	Managing Information in the Enterprise	3
MKTG 5801	Marketing Management in the Enterprise	3
MSOM 5806	Managing Operations in the Enterprise	3
RMI 5801	Enterprise Risk Management	3
SGM 5801	Contemporary Corporate Strategy	3
STAT 5801	Statistical Analysis for Management	3
<b>Electives</b> <sup>1</sup>		<b>12</b>
BA 5804	Global Enterprise Mgt	
BA 5890	Special Topics	
HRM 5113	Power, Influence, and Negotiation	
HRM 5804	Managing and Developing Human Capital in the Enterprise	
<b>Total Credit Hours</b>		<b>48</b>

1

Electives are selected by the Academic Director for the cohort and, thus, may vary from the courses listed here as well as from cohort to cohort. The courses are selected based on any number of factors, including but not limited to regional program focus, topics of interest to the specific cohort, and availability of high-profile faculty in the region.

**Culminating Event:** Students are required to successfully complete the course sequence, which ensures that Executive MBA candidates have mastered the skills necessary to conduct business analyses.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/executive-program-mba-bu-expr-mba>

### Department Information:

Fox School of Business  
 Graduate and International Programs Office  
 1801 Liacouras Walk, 701 Alter Hall (006-22)  
 Philadelphia, PA 19122  
 foxinfo@temple.edu  
 215-204-7678

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Admissions:*  
 Fox Graduate Admissions Office  
 foxinfo@temple.edu

215-204-5890

#### *Program Administration:*

Phyllis Tutora  
 Senior Director, International and Executive Programs  
 ptutora@temple.edu  
 215-204-1184

Carly Gellman  
 Associate Director, Global Executive MBA Programs  
 carly.gellman@temple.edu  
 215-204-4368

## Business Administration Executive Program DBA

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Business Administration Executive Program.

### About the Program

The Executive DBA is a part-time program that prepares senior managers and executives to rigorously discover, describe, study and solve everyday practical problems. Individuals are prepared to approach problems as evidence-based managers by using the tools and techniques of applied business research on issues relevant in the industry.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** The Executive DBA is delivered through six required on-site weekend residencies per year (Friday through Sunday) for the first two years, with additional online components. Residencies are in-person at Convene at Commerce Square in Center City Philadelphia.

**Full-Time/Part-Time Status:** The program is designed for part-time study.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The Executive DBA is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The program prepares graduates for corporate, consulting and academic careers.

**Non-Matriculated Student Policy:** All participants in the Executive DBA must be matriculated.

**Financing Opportunities:** Tuition includes books, lodging and most meals during the required residencies, as well as some funding for research and conference travel. Students are responsible for travel to and from in-person residencies. Students may be considered for merit-based scholarships. The Fox School offers 5% tuition scholarships for all Temple alumni who are admitted to the program. Citizens and permanent residents of the United States are eligible for federal financial aid opportunities. Alternative loans through private lenders may also be available as well as a payment plan through Temple's Bursar's Office. Students are responsible for the total cost of the program.



## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- December 15 - Early Admissions Deadline
- June 30 - Final Deadline

Applications are processed as they are received throughout the year.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from individuals familiar with the applicant's demonstrated leadership, academic potential and critical thinking skills.

**Master's Degree in Discipline/Related Discipline:** Applicants should have at least 12 years of management experience, with at least 7 years at the senior management or executive level. They should hold an MBA or other relevant business-focused master's degree.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Describe your goals and motivations for pursuing the Executive DBA degree and your area of research interest.

**Standardized Test Scores:** No standardized tests are required for admission, but scores may be submitted if the applicant desires.

**Admissions Essay:** A personal statement describing your plan to balance the program's time commitments of about 15 hours per week with your work schedule and other demands is required.

**Resume:** A current professional resume or CV that highlights professional experience and education is required.

**Interview:** Candidates may be interviewed after submission of the application. If an interview is scheduled, on-site interviews are strongly recommended so that applicants can visit Temple University and the Fox School to tour the facilities and meet the Executive DBA faculty. Interviews may also be conducted via video conference.

## Program Requirements

### General Program Requirements:

Number of Credits Required to Earn the Degree: 54

#### Required Courses:

Year 1		Credit Hours
Fall		
BA 9801	Understanding the Firm through Management and Organizational Theory	3
BA 9802	Scientific Inquiry through Applied Research	3
BA 9813	Problem Solving using Quantitative Research Methods	3
<b>Credit Hours</b>		<b>9</b>

<b>Spring</b>		
BA 9806	Integrative Perspectives on Business Knowledge	3
BA 9815	Problem Solving using Qualitative Research Methods	3
Select one of the following:		3
BA 9803	Navigating the Global Marketplace	
BA 9890	Special Topics in Business Research	
<b>Credit Hours</b>		<b>9</b>
<b>Summer</b>		
BA 9683	Research Project I	3
<b>Credit Hours</b>		<b>3</b>
<b>Year 2</b>		
<b>Fall</b>		
BA 9783	Research Project II	3
BA 9814	Advanced Quantitative Research Methods	3
Select one of the following:		3
BA 9817	Applied Qualitative Methods	
BA 9890	Special Topics in Business Research	
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
BA 9816	Creation and Dissemination of Business Knowledge	3
BA 9883	Research Project III	3
Select one of the following:		3
BA 9812	Innovation and Entrepreneurship in the New Economy	
BA 9890	Special Topics in Business Research	
<b>Credit Hours</b>		<b>9</b>
<b>Summer</b>		
BA 9994	Preliminary Examination Preparation	3
<b>Credit Hours</b>		<b>3</b>
<b>Year 3</b>		
<b>Fall</b>		
BA 9998	Pre-Dissertation Research	6
<b>Credit Hours</b>		<b>6</b>
<b>Spring</b>		
BA 9999	Dissertation Research	6
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>54</b>

### Culminating Events:

#### Proposal:

The doctoral dissertation is an original investigation that makes a significant contribution to the field. It should expand the existing body of knowledge and demonstrate the student's own knowledge of both research methods and a mastery of their primary area of interest. In consultation with the committee chair, the proposal should include a statement of the general research problem and motivation for the research; the questions or hypotheses to be investigated; the relevance of the problem to business theory and practice; a review of relevant literature; an outline of the dissertation; a detailed description of the methodology to be used; and expected contributions and practical implications. Executive DBA students should defend their dissertation proposal defense in the Fall of their third year.

**Dissertation:**

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee votes to pass, conditionally pass, or fail the dissertation and the defense at the conclusion of the public presentation based on whether the requirements laid out in the dissertation proposal and agree upon by the committee and the student have been successfully met.

Executive DBA students should defend their dissertation in the Spring of their third year. Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Secretary at least 15 days before the defense is to be scheduled. After the Graduate Secretary has arranged the time, date and room for the defense, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense. The department publicly announces the defense, and the Graduate School announces the defense on its website.

**Contacts****Program Web Address:**

<https://www.fox.temple.edu/academics/degree-programs/executive-doctorate-in-business-administration-dba/>

**Department Information:**

Fox School of Business and Management  
Graduate and International Programs Office  
1801 Liacouras Walk, 701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-7678

**Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

**Department Contacts:****Admissions:**

Barry Griffiths  
Senior Associate Director, Graduate Admissions  
barry.griffiths@temple.edu  
215-204-3960

**Academics:**

Dr. Susan Mudambi  
Academic Director, Executive DBA Program  
susan.mudambi@temple.edu  
215-204-3561

**Program Administrators:**

Phyllis Tutora  
Senior Director, International and Executive Programs  
ptutora@temple.edu  
215-204-1184

Brian Foley  
Associate Director, Executive DBA Program

bfoley@temple.edu  
215-204-2299

**Business Analytics MS**

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Business Analytics.

**About the Program**

The MS in Business Analytics degree, a STEM-certified program, enables graduates to effectively use data and models to support identification and evaluation of opportunities and improve decision-making.

The Business Analytics MS leverages the ever-increasing volume and importance of data as a strategic asset for organizations. Graduates enhance their managerial skillset and improve decision-making through analytics. The curriculum supports student development of advanced skills and techniques that can be applied to discipline-specific and general business problems. The MS program ensures graduates are prepared to meet the growing demand for talent in the areas of managing, analyzing, predicting and discovering insights from complex data available to modern corporations.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main, Center City, Online

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. Graduates are hired into such positions as:

- Big Data Analytics Specialist
- Data Analyst
- Data Scientist/Information Scientist
- Management Analyst/Consultant
- Manager of Services or Manufacturing Operations
- Market Research Analyst
- Project Manager
- Research Analyst
- Supply Chain Manager

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program or graduate certificate program.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program. Scholarship funds are limited and available based on merit.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

Applications are reviewed as they are received and can sometimes be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

Number Required: 1

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### Standardized Test Scores:

GRE/GMAT: Required. Scores for the GRE typically fall within the following percentile ranges: 50 to 99 Verbal; 80 to 99 Quantitative.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MS program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the department chair. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
BA 5687	Advanced Professional Development Strategies <sup>1</sup>	0
STAT 5001	Quantitative Methods for Business	3
STAT 5602	Visualization: The Art of Numbers and the Psychology of Persuasion	3
STAT 5603	Statistical Learning and Data Mining	3
STAT 5604	Experiments: Knowledge by Design	3
STAT 5605	Decision Models: From Data to Decisions	3
STAT 5606	Data: Care, Feeding, and Cleaning in Python	3
STAT 5607	Advanced Business Analytics	3
<b>Electives</b>		
Select two from the following: <sup>2</sup>		6
BA 5685	Internship or Externship in Business	
FIN 5001	Financial Analysis and Strategy	
FIN 5104	Advanced Corporate Finance	
FIN 5115	Financial Modeling for Investments and Corporate Finance	
MKTG 5103	Marketing Research: Techniques and Application	
MKTG 5111	Customer Data Analytics	
MKTG 5617	Advanced Modalities	
MKTG 5618	Quantitative Pricing and Revenue Analytics	
MSOM 5001	Operations Management	
MSOM 5107	Lean, Six Sigma, and the Science of Improvement	
MSOM 5108	Project Management	
SCM 5101	Supply Chain Analytics	
STAT 5170	Special Topics	
STAT 5182	Independent Study	
STAT 5190	Special Topics - Stat	
STAT 8109	Applied Statistics and Data Science	
STAT 8111	Survey Techniques for Business Applications	
STAT 8116	Categorical Data Analysis	
STAT 8122	Advanced SAS Programming	
<b>Capstone Course</b>		<b>3</b>
BA 5685	Internship or Externship in Business <sup>3</sup> or STAT 565 Capstone in Analytics	
<b>Total Credit Hours</b>		<b>30</b>

1

BA 5687 may be waived based on prior academic or professional preparation. Students should consult with the Academic Director.

2

Two courses are required. Students should pursue a combination of electives that supports their educational and career goals. Note that in all cases, students are responsible for completing prerequisites. They are also encouraged to consult with the Academic Director or advisor when making their course selections. Alternate courses may be taken with permission from the Academic Director.

3

Permission from the Academic Director is required to enroll in BA 5685 Internship or Externship in Business as an elective. This permission, however, does not guarantee that the course will fulfill the capstone requirement. The Academic Director must grant a second permission for BA 5685 to count for the capstone.

#### **Culminating Event:**

##### *Capstone Course:*

All students in the Business Analytics MS program participate in a capstone experience that is designed to integrate real-world problems into the curriculum. Students may choose between BA 5685 Internship or Externship in Business and STAT 5651 Capstone in Analytics. For STAT 5651, a sponsoring corporation provides a problem and real data, and students divide into teams to work on the problem. At the end of the term, the top several groups as judged by professors present to the program's advisory board and other corporate judges.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/business-analytics-ms-bu-busa-ms>

### **Department Information:**

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### **Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

### **Department Contacts:**

#### *Academic Director:*

Yiwei Chen  
Assistant Professor  
yiwei.chen@temple.edu

#### *Assistant Director, Business Analytics and Data Science Programs:*

Samar Khan  
1810 Liacouras Walk, Room 330  
samar.khan@temple.edu  
215-204-6309

#### *Specialized Master's Programs Coordinator:*

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
foxms@temple.edu  
215-204-7678

## **Business Research MS**

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Business Research.

## **About the Program**

The Master of Science in Business Research is a STEM-designated PhD-preparatory degree program. Coursework provides exposure to and training in core business theories, research methods and advanced statistical analyses. Students enroll in coursework that allows them to pursue their own research projects. The training received during pursuit of the Business Research MS at Fox School of Business and Management prepares students for PhD study at Temple University and other institutions of higher learning. Although students may apply to a Fox PhD program upon completion of the degree, admission is not guaranteed.

**Time Limit for Degree Completion:** Graduate School guidelines allow for up to six years for completion of the master's degree.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Job Prospects:** The program is primarily dedicated to preparing its students for study in PhD programs.

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program.

## **Admission Requirements and Deadlines**

### **Application Deadline:**

#### *Fall:*

- January 5 – Early Admissions Deadline
- March 1 – Final Deadline

Applications received after January 5 are reviewed on a rolling basis.

APPLY ONLINE to this Fox graduate program.

### **Letters of Reference:**

*Number Required:* 1

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### **Standardized Test Scores:**

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the

ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Common Core Course</b>		
STAT 8112 or BA 9105	Statistical Methods for Business Research I Business Econometrics I	3
<b>Fox Core Courses</b> <sup>1</sup>		
Select five from the following:		15
BA 9001	Organizations and Management Theory	
BA 9002	Scientific Inquiry-Management Research	
BA 9003	Seminar in Organizational Behavior	
BA 9103	Econ Theory of Choice	
BA 9104	Game Theory	
BA 9105	Business Econometrics I	
BA 9106	Business Econometrics II	
BA 9108	Capital Markets Research	
BA 9201	Quant Methods in Bus Res	
BA 9202	Qualitative Research Methods	
BA 9203	Financial Economics	
BA 9205	Information Economics	
BA 9207	Quantitative Research Methods II	
BA 9208	Quantitative Research Methods III	
BA 9209	Business Econometrics III	
IB 9001	Theory-Int Bus & Mltinat	
STAT 8108	Applied Multivariate Analysis I	
STAT 8112	Statistical Methods for Business Research I	
STAT 8113	Statistical Methods for Business Research II	
STAT 8114	Survival Analysis I	
<b>Elective Courses</b> <sup>1</sup>		12
<b>Total Credit Hours</b>		<b>30</b>

1

With approval from the Concentration Director, the student's program of study may be individualized to a significant degree for the student's best professional and scholarly development.

**Culminating Event:** Satisfactory completion of coursework is required to earn the Business Research MS.

## Contacts

### Program Web Address:

<https://www.fox.temple.edu/academics/fox-phd/ms-business-research>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

**Admissions:**  
Fox Graduate Admissions Office  
foxinfo@temple.edu  
215-204-5890

**Managing Director:**  
Dr. Crystal Harold  
crystal.harold@temple.edu  
215-204-2425

## Corporate Compliance and Ethics MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Decision Neuroscience MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is *not open for direct admission*. The Master of Science in Decision Neuroscience is awarded to a student enrolled in the Doctor of Philosophy (PhD) program in Decision Neuroscience who successfully completes 30 credits of required coursework but chooses to not continue in the PhD program.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
BA 9813	Problem Solving using Quantitative Research Methods	3
MKTG 9090	Sem-Sel Topics in Mktg <sup>1</sup>	3
PSY 8310	Topical Seminar in Cognitive Psychology (2 courses) <sup>2</sup>	6
	Course in decision neuroscience	3
	Proseminar in decision neuroscience	3
<b>Electives</b>		
	Select four from the following:	12
Methods Electives		
BA 9806	Integrative Perspectives on Business Knowledge	
BA 9814	Advanced Quantitative Research Methods	
BA 9815	Problem Solving using Qualitative Research Methods	
PSY 8033	Hierarchical Linear Modeling	
Other Electives		
MKTG 9001	Behavioral Science Seminar	
MKTG 9002	Seminar on Behavioral Research in Marketing	
MKTG 9003	Sem-Quant Research-Mktg	
PSY 8312	Core Course in Cognitive Psychology	
PSY 8712	Core Course in Behavioral Neuroscience	
<b>Total Credit Hours</b>		<b>30</b>

1

The select topic for this course is an introduction to research in judgment and decision-making and their applications.

2

PSY 8310 Topical Seminar in Cognitive Psychology is taken twice for credit. One course topic provides an introduction to the biological bases of higher brain function, including attention, consciousness, emotion, executive functions, language, memory and perception. The other provides an overview of the use of functional magnetic resonance imaging (fMRI) in the investigation of human sensory, motor and cognitive function.

## Decision Neuroscience PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Decision Neuroscience.

### About the Program

The field of decision neuroscience provides new insights into the mechanisms that underlie a wide range of economic and social phenomena, from risky choice and consumer behavior to altruism and cooperation. It is also a primary example of truly interdisciplinary research, with people from such diverse fields as business administration, economics, engineering, neuroscience, philosophy, physics and

psychology working together to advance knowledge of mechanisms underlying decision-making and decision preferences.

The interdisciplinary PhD program in Decision Neuroscience at the Fox School of Business and Management is a collaborative effort with the Department of Psychology and Neuroscience in the College of Liberal Arts. Through the efforts of its Center for Applied Research in Decision Making, the Fox School of Business has been at the forefront of the field of decision neuroscience over the past ten years. Similarly, Temple University's Department of Psychology and Neuroscience has long been a leader in brain and cognitive science research.

Students enrolled in the program gain a thorough understanding of the intellectual issues in the rapidly growing field of decision neuroscience and its subfields of neuroeconomics and neuromarketing. The program has the unique vision of integrating scientific findings with everyday real-world problems. It is designed for students who want to work at the intersection of neuroscience and business.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** The program is inherently interdisciplinary.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Job Prospects:** Graduates of the program are prepared to seek tenure-track appointments either in business schools or psychology departments, depending on their approach to the program's curriculum.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). Level of support is based on the concentration, the applicant's qualifications and competitive considerations. Students can also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work

supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

**Standardized Test Scores:**

GMAT/GRE: Required. GMAT scores are preferred. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 42*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BA 9813	Problem Solving using Quantitative Research Methods	3
MKTG 9090	Sem-Sel Topics in Mktg <sup>1</sup>	3
PSY 8310	Topical Seminar in Cognitive Psychology (2 courses) <sup>2</sup>	6
	Course in decision neuroscience	3
	Proseminar in decision neuroscience	3
<b>Methods Electives</b>		
Select two from the following:		6
BA 9806	Integrative Perspectives on Business Knowledge	
BA 9814	Advanced Quantitative Research Methods	
BA 9815	Problem Solving using Qualitative Research Methods	
PSY 8033	Hierarchical Linear Modeling	
<b>Other Electives</b>		

Select four from the following:		12
MKTG 9001	Behavioral Science Seminar	
MKTG 9002	Seminar on Behavioral Research in Marketing	
MKTG 9003	Sem-Quant Research-Mktg	
PSY 8310	Topical Seminar in Cognitive Psychology	
PSY 8312	Core Course in Cognitive Psychology	
PSY 8712	Core Course in Behavioral Neuroscience	

**Research Courses**

BA 9994	Preliminary Examination Preparation	1
BA 9998	Pre-Dissertation Research	2
BA 9999	Dissertation Research	3

**Total Credit Hours**

**42**

1

The select topic for this course is an introduction to research in judgment and decision-making and their applications.

2

PSY 8310 Topical Seminar in Cognitive Psychology is taken twice for credit. One course topic provides an introduction to the biological bases of higher brain function, including attention, consciousness, emotion, executive functions, language, memory and perception. The other provides an overview of the use of functional magnetic resonance imaging (fMRI) in the investigation of human sensory, motor and cognitive function.

**Additional Requirements:**

*Research Rotations:*

In addition to undertaking specially designed interdisciplinary coursework, students complete research rotations during the first year of study that prepare them for independent research in the field of decision neuroscience. Students are required to complete two laboratory rotations in their first year (Fall and Spring) that would ideally be in different subfields with different mentors. Students also have the option to complete a third rotation during the Summer if they require additional exposure.

Research rotations are designed to give students a wide range of knowledge in the area of decision neuroscience by being engaged in the research of an assigned lab. When rotating through a lab (or with a research mentor), students are often paired with a senior lab member (e.g., a postdoctoral fellow or senior graduate student) to work on an ongoing research project. In some cases, they may be given a new project based on their knowledge and skill levels. Students are not, however, expected to complete a full project within an academic term.

*Research Meetings:*

Students are expected to attend research meetings and to be fully engaged in the research culture.

*Publications:*

It is expected that students will write, submit and publish articles.

*Grant Proposals:*

Students are expected to prepare a grant proposal for submission to a government funding agency. Eligible students are also required to write and submit a National Research Service Award (NRSA) proposal at the end of their third year. International students who are not eligible for federal grants are encouraged to work on submissions with faculty members.

**Culminating Events:**

**Comprehensive Examination:**

The comprehensive examination is taken at the end of the second year of study. Each student must propose and defend a major area paper in their proposed field of research. Upon passing the exam, students choose a faculty member from either Fox School or the College of Liberal Arts as their primary mentor.

**Dissertation:**

The doctoral dissertation is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the student's department. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation. This committee is comprised of the Doctoral Advisory Committee and at least one additional faculty member from outside the department.

If any member decides to withdraw from the committee, the student shall notify the Chair of the Dissertation Examining Committee and the PhD Program Director. The student, in consultation with the Chair, is responsible for finding a replacement. Inability to find a replacement shall constitute evidence that the student is unable to complete the dissertation. In such a case, the student may petition the PhD Program Director for a review. Once review of the facts and circumstances is completed, the Director rules on the student's progress. If the Director rules that the student is not capable of completing the dissertation, the student is dismissed from the program. This decision may be appealed to the Senior Associate Dean. If dismissed, the student may appeal to the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Secretary at least 15 days before the defense is to be scheduled. The Graduate Secretary arranges the time, date and room within two working days, and forwards to the student the appropriate forms. After the Graduate Secretary has scheduled the defense, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense. The department posts flyers announcing the defense, and the Graduate School announces the defense on its website.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/decision-neuroscience-phd-bu-dns-phd>

**Department Information:**

Fox School of Business and Management  
1801 Liacouras Walk  
Alter Hall, Suite 701  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
Fax: 215-204-1632

**Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

**Department Contacts:****Admissions:**

Fox PhD Admissions  
foxphdo@temple.edu

**Program Director:**

Vinod Venkatraman, PhD  
Associate Professor, Marketing  
vinod.venkatraman@temple.edu

**Digital Marketing MS**

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Digital Marketing.

**About the Program**

The MS in Digital Marketing degree program is designed to address digital marketing best practices to empower graduates to thrive at the front line of the changing media environment. Students are equipped with the skills necessary to develop and manage a modern brand through authentic communication with customers and prospects alike. In addition, students are empowered to think strategically about how brands, their employees and society-at-large interact to hone more effective multi-platform media plans. The entire program is designed to provide students with hands-on, real-world experiences leveraging marketing research, data visualization and advanced analytics to enhance strategies they can immediately apply to their current careers and/or to entrepreneurial initiatives.

Upon program completion, graduates pursue various marketing and/or advertising positions. Many positions relate to working and living in a multi- and omni-channel world. Today's marketers cannot simply rely on traditional marketing and advertising alone. They must be able to segment, target and position their brand, product and service for a consumer in a strategic, timely, relevant and useful manner. Building and maintaining brand loyalty and long-term customer relationships is key. Examples of career paths upon program completion include:

- Account Supervisor/Associate Vice President of Marketing
- Advertising Account Executive or Senior Account Executive



- Brand Strategy Director
- Senior Communications Strategist
- Senior Content Marketing Strategist
- Director of Digital/Mobile/Social Strategies
- Director of Marketing/Advertising/Communications/Public Relations
- Insights and Analytics Specialist
- Media Planning/Buying Specialist
- Multi-platform Account Director
- Product Development Manager
- Search, Social, and Emerging Media Specialist
- Senior Brand Manager
- SEO Account Manager/Specialist

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The degree program is completed on a part-time basis.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MS in Digital Marketing is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search.

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

Applications are reviewed as they are received and can sometimes be considered after the final deadline.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 1

*From Whom:* Professional references from an immediate supervisor, current or past, is preferred. An academic reference is acceptable. If self-employed, a reference from a client is permissible.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited university or college is required.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### Standardized Test Scores:

GRE/GMAT: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MS program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the department chair. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MIS 5001	Information Technology Management	3
MIS 5101	Business Intelligence	3
MIS 5603	Social Media Innovation	3
MKTG 5001	Marketing Management/Strategy <sup>1</sup>	3
MKTG 5101	Consumer and Buyer Behavior	3
MKTG 5604	Digital Marketing	3
MKTG 5605	Digital Innovation in Product Management and Branding	3
<b>Electives <sup>2</sup></b>		
Select two from the following:		6
MIS 5102	Process Improvement and Innovation	
MIS 5109	User Experience Design	

MKTG 5103	Marketing Research: Techniques and Application	
MKTG 5107	Product Management	
MKTG 5111	Customer Data Analytics	
MKTG 5606	Digital Innovation in Mobile Marketing and Communication	
<b>Capstone Course</b>		
MKTG 5118	Marketing MS Capstone <sup>3</sup>	3
	or MKTG 5182 Independent Study	
<b>Total Credit Hours</b>		<b>30</b>

1

All students take MKTG 5001 as their first course in the program.

2

With prior approval from the program's Academic Director, students may take other relevant 5000-level electives in the Fox School or from another school or college at Temple University.

3

Selection of MKTG 5182 Independent Study requires approval from the program's Academic Director.

**Culminating Event:** Satisfactory completion of coursework is required to earn the Digital Marketing MS.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/digital-marketing-ms-bu-dmkg-ms>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

#### Academic Director:

Jennifer Sundstrom-Fitzgerald  
Assistant Professor of Marketing  
jen.fitzgerald@temple.edu  
215-204-9142

#### Specialized Master's Programs Coordinator:

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
foxms@temple.edu  
215-204-7678

## Finance MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

Currently offered as an international partner program and open only to students affiliated with the international partner institution.

## Financial Analysis MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Financial Analysis.

### About the Program

For the Master of Science in Financial Analysis, students explore project-based applications of today's best financial theory and technology practices, including data science for finance, to build a skill set for 21st-century success. Students make strides toward the Chartered Financial Analyst (CFA) designation during their program studies. They also connect with senior leaders and industry experts through a distinguished guest speaker series and visits to firms in the Greater Philadelphia region and on Wall Street.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time students are able to complete the degree program in 10 or 22 months, while part-time students taking 8 or fewer credits per term are able to complete the program in two years.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MS in Financial Analysis is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. Graduates develop industry-matched skills in finance that distinguish them for employment with accounting firms, commercial banks, consulting companies, financial technology firms, government and regulatory agencies, hedge funds, insurance companies, investment banks and investment management companies.

**Non-Matriculated Student Policy:** Students are not allowed to take classes under non-matriculated status.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:*

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis.

APPLY ONLINE to this Fox graduate program.

**Letters of Reference:**

*Number Required:* 1

*From Whom:* Academic references and/or professional references from an immediate supervisor, current or past, are accepted.

**Coursework Required for Admission Consideration:** Applicants must demonstrate completion of coursework in Accounting, Finance, Micro/Macroeconomics and Statistics with a grade of "B" or better earned.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

**Standardized Test Scores:**

GRE/GMAT: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Transfer credit is not accepted for the Financial Analysis MS degree.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*<sup>1</sup>

Year 1		
Fall		Credit Hours
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5603	Financial Accounting	1
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
Fall Term		
FIN 5601	Financial Technology	1
FIN 5612	Asset Pricing	1.5
FIN 5613	Derivative Valuation	1.5
FIN 5615	Data Science in Finance	1.5
FIN 5618	Corporate Value Management	1.5
FIN 5623	Risk Measurement	1.5
FIN 5627	Financial Econometrics	1.5
FIN 5628	Global Economy	1.5
FIN 5671	Financial Analysis I	1.5
FIN 5675	Professional Development	1
<b>Credit Hours</b>		<b>18</b>
Spring		
FIN 5622	Machine Learning in Finance	1.5
FIN 5631	Financial Time Series	1.5
FIN 5632	Investment Management	1.5
FIN 5637	Applied Corporate Finance	1.5
FIN 5638	Behavioral Finance	1.5
FIN 5647	Financial Reporting & Analysis	1.5
FIN 5648	Quantitative Portfolios	1.5
FIN 5672	Financial Analysis II	1.5
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>30</b>

1

With approval from the Academic Director, FIN 5683 Special Study in Finance or non-FIN graduate courses may be substituted for any required course.

## 10-Month Full-Time MS

Year 1		
Fall		Credit Hours
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5603	Financial Accounting	1
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
Fall I		
FIN 5612	Asset Pricing	1.5
FIN 5613	Derivative Valuation	1.5
FIN 5618	Corporate Value Management	1.5
FIN 5671	Financial Analysis I	1.5
FIN 5675	Professional Development	1
Fall II		

FIN 5601	Financial Technology	1
FIN 5615	Data Science in Finance	1.5
FIN 5623	Risk Measurement	1.5
FIN 5627	Financial Econometrics	1.5
FIN 5628	Global Economy	1.5
<b>Credit Hours</b>		<b>18</b>

**Spring**

Spring I		
FIN 5631	Financial Time Series	1.5
FIN 5632	Investment Management	1.5
FIN 5637	Applied Corporate Finance	1.5
FIN 5648	Quantitative Portfolios	1.5
Spring II		
FIN 5622	Machine Learning in Finance	1.5
FIN 5638	Behavioral Finance	1.5
FIN 5647	Financial Reporting & Analysis	1.5
FIN 5672	Financial Analysis II	1.5
<b>Credit Hours</b>		<b>12</b>

**Total Credit Hours** **30**

**22-Month Full-Time MS <sup>1</sup>****Year 1**

<b>Fall</b>		<b>Credit Hours</b>
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5603	Financial Accounting	1
Fall I		
FIN 5612	Asset Pricing	1.5
FIN 5618	Corporate Value Management	1.5
FIN 5675	Professional Development	1
Fall II		
FIN 5615	Data Science in Finance	1.5
FIN 5627	Financial Econometrics	1.5
<b>Credit Hours</b>		<b>9</b>

**Spring**

Spring I		
FIN 5631	Financial Time Series	1.5
FIN 5637	Applied Corporate Finance	1.5
FIN 5648	Quantitative Portfolios	1.5
Spring II		
FIN 5622	Machine Learning in Finance	1.5
FIN 5638	Behavioral Finance	1.5
FIN 5671	Financial Analysis I	1.5
<b>Credit Hours</b>		<b>9</b>

**Year 2**

<b>Fall</b>		
Finance Academy, August		
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
Fall I		
FIN 5601	Financial Technology	1

FIN 5613	Derivative Valuation	1.5
FIN 5672	Financial Analysis II	1.5
Fall II		
FIN 5623	Risk Measurement	1.5
FIN 5628	Global Economy	1.5
<b>Credit Hours</b>		<b>9</b>

**Spring**

Spring I		
FIN 5632	Investment Management	1.5
Spring II		
FIN 5647	Financial Reporting & Analysis	1.5
<b>Credit Hours</b>		<b>3</b>

**Total Credit Hours** **30**

<sup>1</sup>

This full-time program can be modified for part-time study. In the part-time 22-month program, students reduce their courseload in the Spring term of their first year of study to 6 credits and increase their courseload to 6 credits in the Spring term of their second year. Contact the Academic Director for the 22-month part-time schedule for the Financial Analysis MS.

**Culminating Event:** Successful completion of coursework is required to earn the MS in Financial Analysis degree.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/financial-analysis-ms-bu-fian-ms>

**Department Information:**

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

**Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

**Department Contacts:**

*Academic Director:*  
John Soss, CFA, FRM  
jsoss@temple.edu  
215-204-8453

*Specialized Master's Programs Coordinator:*

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
foxms@temple.edu  
215-204-7678

# Financial Analysis and Quantitative Risk Management MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Financial Analysis and Quantitative Risk Management.

## About the Program

Through the Master of Science in Financial Analysis and Quantitative Risk Management, students build industry-matched knowledge and skills across the fields of financial analysis, data science, quantitative modeling and risk management. Combining the benefits of Temple's specialized Financial Analysis MS and Quantitative Finance and Risk Management MS programs, the MS in Financial Analysis and Quantitative Risk Management offers a unique curriculum that supports pursuing both the Chartered Financial Analyst (CFA) Exam Levels I through III and the Financial Risk Management (FRM) Exam Parts I and II during graduate study.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time students are able to complete the Financial Analysis and Quantitative Risk Management MS degree program in 22 months, while part-time students can complete the program in three years.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MS in Financial Analysis and Quantitative Risk Management is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. Graduates develop industry-matched skills in finance that distinguish them for employment with accounting firms, commercial banks, consulting companies, financial technology firms, government and regulatory agencies, hedge funds, insurance companies, investment banks and investment management companies.

**Non-Matriculated Student Policy:** Students are not allowed to take classes under non-matriculated status.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:*

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

Applications are reviewed as they are received and can sometimes be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

**Letters of Reference:**

*Number Required:* 1

*From Whom:* Academic and/or professional references from an immediate supervisor, current or past, are accepted.

**Coursework Required for Admission Consideration:** Applicants must demonstrate completion of coursework in finance and multivariate calculus (Calculus 3) with a grade of "B" or better earned.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

**Standardized Test Scores:**

GRE/GMAT: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Transfer credit is not accepted for the Financial Analysis and Quantitative Risk Management MS degree.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 43

*Required Courses:*<sup>1</sup>

<b>Year 1</b>		
<b>Fall</b>		<b>Credit Hours</b>
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5603	Financial Accounting	1
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
Fall Term		
FIN 5601	Financial Technology	0.5
FIN 5612	Asset Pricing	1.5
FIN 5615	Data Science in Finance	1.5
FIN 5618	Corporate Value Management	1.5
FIN 5627	Financial Econometrics	1.5
FIN 5628	Global Economy	1.5
FIN 5671	Financial Analysis I	1.5
FIN 5675	Professional Development	1
<b>Credit Hours</b>		<b>14.5</b>
<b>Spring</b>		
FIN 5632	Investment Management	1.5
FIN 5637	Applied Corporate Finance	1.5
FIN 5638	Behavioral Finance	1.5
FIN 5647	Financial Reporting & Analysis	1.5
FIN 5648	Quantitative Portfolios	1.5
FIN 5672	Financial Analysis II	1.5
<b>Credit Hours</b>		<b>9</b>
<b>Year 2</b>		
<b>Fall</b>		
Finance Academy, August		
FIN 5607	Stochastic Calculus & Finance	1
Fall Term		
FIN 5601	Financial Technology	0.5
FIN 5614	Continuous Time Finance	1.5
FIN 5619	Quant Fixed Income	1.5
FIN 5624	Numerical Methods	1.5
FIN 5629	Value at Risk	1.5
FIN 5673	Financial Risk Management I	1.5
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
FIN 5622	Machine Learning in Finance	1.5
FIN 5631	Financial Time Series	1.5
FIN 5634	Stochastic Volatility	1.5
FIN 5639	Quantitative Risk Modeling	1.5
FIN 5646	Frontiers in Quantitative Finance	1.5
FIN 5649	Enterprise Risk Management	1.5
FIN 5674	Financial Risk Management II	1.5
<b>Credit Hours</b>		<b>10.5</b>
<b>Total Credit Hours</b>		<b>43</b>

1

With approval from the Academic Director, FIN 5683 Special Study in Finance or non-FIN graduate courses may be substituted for any required course.

## Full-Time MS <sup>1</sup>

<b>Year 1</b>		
<b>Fall</b>		<b>Credit Hours</b>
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5603	Financial Accounting	1
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
Fall I		
FIN 5612	Asset Pricing	1.5
FIN 5618	Corporate Value Management	1.5
FIN 5671	Financial Analysis I	1.5
FIN 5675	Professional Development	1
Fall II		
FIN 5601	Financial Technology	0.5
FIN 5615	Data Science in Finance	1.5
FIN 5627	Financial Econometrics	1.5
FIN 5628	Global Economy	1.5
<b>Credit Hours</b>		<b>14.5</b>
<b>Spring</b>		
Spring I		
FIN 5632	Investment Management	1.5
FIN 5637	Applied Corporate Finance	1.5
FIN 5648	Quantitative Portfolios	1.5
Spring II		
FIN 5638	Behavioral Finance	1.5
FIN 5647	Financial Reporting & Analysis	1.5
FIN 5672	Financial Analysis II	1.5
<b>Credit Hours</b>		<b>9</b>
<b>Year 2</b>		
<b>Fall</b>		
Finance Academy, August		
FIN 5607	Stochastic Calculus & Finance	1
Fall I		
FIN 5614	Continuous Time Finance	1.5
FIN 5619	Quant Fixed Income	1.5
FIN 5673	Financial Risk Management I	1.5
Fall II		
FIN 5601	Financial Technology	0.5
FIN 5624	Numerical Methods	1.5
FIN 5629	Value at Risk	1.5
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
Spring I		
FIN 5631	Financial Time Series	1.5
FIN 5634	Stochastic Volatility	1.5

FIN 5639	Quantitative Risk Modeling	1.5
Spring II		
FIN 5622	Machine Learning in Finance	1.5
FIN 5646	Frontiers in Quantitative Finance	1.5
FIN 5649	Enterprise Risk Management	1.5
FIN 5674	Financial Risk Management II	1.5
<b>Credit Hours</b>		<b>10.5</b>
<b>Total Credit Hours</b>		<b>43</b>

1

With approval from the Academic Director, FIN 5683 Special Study in Finance or non-FIN graduate courses may be substituted for any required course.

## Part-Time MS <sup>1</sup>

<b>Year 1</b>		
<b>Fall</b>		<b>Credit Hours</b>
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5603	Financial Accounting	1
Fall I		
FIN 5612	Asset Pricing	1.5
FIN 5618	Corporate Value Management	1.5
Fall II		
FIN 5615	Data Science in Finance	1.5
FIN 5675	Professional Development	1
<b>Credit Hours</b>		<b>7.5</b>
<b>Spring</b>		
Spring I		
FIN 5637	Applied Corporate Finance	1.5
FIN 5648	Quantitative Portfolios	1.5
Spring II		
FIN 5622	Machine Learning in Finance	1.5
FIN 5638	Behavioral Finance	1.5
<b>Credit Hours</b>		<b>6</b>
<b>Year 2</b>		
<b>Fall</b>		
Finance Academy, August		
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
Fall I		
FIN 5601	Financial Technology	1
FIN 5671	Financial Analysis I	1.5
Fall II		
FIN 5627	Financial Econometrics	1.5
FIN 5628	Global Economy	1.5
<b>Credit Hours</b>		<b>7.5</b>
<b>Spring</b>		
Spring I		
FIN 5631	Financial Time Series	1.5
FIN 5632	Investment Management	1.5
Spring II		

FIN 5647	Financial Reporting & Analysis	1.5
FIN 5672	Financial Analysis II	1.5
<b>Credit Hours</b>		<b>6</b>

### Year 3

#### Fall

Finance Academy, August

FIN 5607	Stochastic Calculus & Finance	1
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#### Fall I

FIN 5614	Continuous Time Finance	1.5
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FIN 5619	Quant Fixed Income	1.5
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FIN 5673	Financial Risk Management I	1.5
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#### Fall II

FIN 5624	Numerical Methods	1.5
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FIN 5629	Value at Risk	1.5
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**Credit Hours** **8.5**

#### Spring

##### Spring I

FIN 5634	Stochastic Volatility	1.5
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FIN 5639	Quantitative Risk Modeling	1.5
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##### Spring II

FIN 5646	Frontiers in Quantitative Finance	1.5
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FIN 5649	Enterprise Risk Management	1.5
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FIN 5674	Financial Risk Management II	1.5
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**Credit Hours** **7.5**

**Total Credit Hours** **43**

1

With approval from the Academic Director, FIN 5683 Special Study in Finance or non-FIN graduate courses may be substituted for any required course.

**Culminating Event:** Successful completion of coursework is required to earn the MS in Financial Analysis and Quantitative Risk Management.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/financial-analysis-and-quantitative-risk-management-ms-bu-faqr-ms>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Academic Director:*

John Soss, CFA, FRM  
jsoss@temple.edu  
215-204-8453

*Specialized Master's Programs Coordinator:*

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
foxms@temple.edu  
215-204-7678

## Global Finance MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is available only to students in China, in collaboration with our partner university, and is *not open for direct admission*. The Master of Science in Global Finance is awarded to a student enrolled in the Doctor of Science (DS) in Global Finance who successfully completes 30 credits of required coursework but chooses to not continue in the DS program.

### Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Year 1		
Fall		Credit Hours
FIN 9014	Best Practices in Valuation	3
FIN 9018	Financial Markets and Institutions	3
FIN 9019	Investment Allocation and Management	3
<b>Credit Hours</b>		<b>9</b>
Spring		
FIN 9021	Mergers and Acquisitions	3
FIN 9022	Private Equity	3
Select one from the following:		3
FIN 9023	Real Estate Finance	
FIN 9090	Spec Topic Finance <sup>1</sup>	
<b>Credit Hours</b>		<b>9</b>
Summer		
FIN 9015	Corporate Governance	3
<b>Credit Hours</b>		<b>3</b>
Year 2		
Fall		Credit Hours
FIN 9013	Alternative Investments	3
FIN 9016	Derivatives and Risk Management	3
<b>Credit Hours</b>		<b>6</b>
Spring		
FIN 9017	Dissertation Methodologies	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>30</b>

1

FIN 9090 Spec Topic Finance may replace FIN 9023 Real Estate Finance as a core course.

## Global Finance DS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is available only to students in China, in collaboration with our partner university. This Doctor of Science program is not accepting applications for the 2023-2024 academic year.

## Health Administration MHA

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Health Administration.

### About the Program

Catering to the needs of busy working professionals with at least three years of work experience, the MHA is a 30-credit, part-time program designed to help current professionals advance their careers and become leaders in the industry. Working professionals can complete the MHA in either a hybrid or fully online format with flexible class times and locations.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main, Center City, Online

**Full-Time/Part-Time Status:** The degree program is designed to be completed on a part-time basis.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MHA is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources. MHA students are typically full-time working professionals seeking to enhance their management skills to improve performance in their existing jobs. Some students seek to move from clinical to more administrative responsibilities and others seek to enter the healthcare sector.

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program or graduate certificate program.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

### Admission Requirements and Deadlines

**Application Deadline:**



*Fall:*

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

*Spring:*

- August 1 - Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis.

APPLY ONLINE to this Fox graduate program.

**Letters of Reference:**

*Number Required:* 1

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited university or college is required.

**Statement of Goals:** Essay prompts can be found in the application portal.

**Standardized Test Scores:**

GRE/GMAT: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required. It must reflect a minimum of three years of professional leadership or healthcare experience.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MHA program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the department chair. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
ACCT 5001	Accounting for Managerial and Investment Analysis and Planning	3
BA 5687	Advanced Professional Development Strategies <sup>1</sup>	0
HCM 5101	Health Systems Organization and Development	3
HCM 5102	Healthcare Organizational Leadership and Strategy	3
HCM 5103	Financial Management of Healthcare Organizations	3
RMI 5051	Managing Risk	3
RMI 5103	Health Risks	3
STAT 5001	Quantitative Methods for Business	3
STAT 5602	Visualization: The Art of Numbers and the Psychology of Persuasion	3
<b>Electives <sup>2</sup></b>		<b>6</b>
<b>Total Credit Hours</b>		<b>30</b>

1

BA 5687 may be waived based on prior academic or professional preparation. Consult with the MHA Academic Director.

2

Students have the option to select electives to study a particular subject area more deeply or to choose any two electives. To support student learning based on varied interests and career needs, elective courses have been grouped. The list is not exhaustive given that the educational and professional needs of every student cannot be predicted; courses change or are removed over time; and departments add new courses that may be beneficial for student learning and professional development. Thus, the MHA Academic Director may approve other electives for students on an individual basis. Note that some electives may have prerequisites. See the list of recommended electives below:

## Recommended Electives Grouped by Subject Area

Code	Title	Credit Hours
<b>Finance</b>		
FIN 5001	Financial Analysis and Strategy	
FIN 5104	Advanced Corporate Finance	
FIN 5114	Financial Markets and Institutions	
FIN 5134	Fintech, Blockchain and Digital Disruption	
<b>Human Resource Management</b>		
HRM 5001	Leading Organizations	
HRM 5051	Developing Human Resource Management Strategies	
HRM 5112	Leading High Performing Teams	
HRM 5113	Power, Influence, and Negotiation	

**Project Management**

MSOM 5001	Operations Management
MSOM 5107	Lean, Six Sigma, and the Science of Improvement
MSOM 5108	Project Management
<b>Strategy - Consulting</b>	
SGM 5133	Management Consulting: Principles and Practices
SGM 5134	The Consulting Engagement: Managing Projects and Change
<b>Strategy - General</b>	
BA 5287	Fox MBA Capstone Experience <sup>1</sup>
SGM 5051	Business Strategy in a Global Environment
SGM 5136	Principles of Strategy and Management
<b>Strategy - Innovation/Problem Solving</b>	
SGM 5103	Management of Technology and Innovation
SGM 5142	Business Model Innovation
SGM 5144	Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges
<b>Miscellaneous</b>	
HCM 5182	Independent Study
LGLS 5701	Legal and Ethical Foundations of Business
MIS 5001	Information Technology Management (Other)
MKTG 5001	Marketing Management/Strategy

1

For BA 5287 to count toward the MHA, students must enroll in a section with a healthcare project.

**Culminating Event:** Successful completion of coursework is required to earn the MHA degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/health-administration-mha-bu-hadm-mha>

### Department Information:

Fox School of Business and Management  
701 Alter Hall (006-22)  
1801 Liacouras Walk  
Philadelphia, PA 19122-6083  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Academic Director:*  
Barbara Manaka, PhD, RN  
barbara.manaka@temple.edu  
215-204-4963

*Specialized Master's Programs Coordinator:*  
Rachel Carr

Senior Associate Director for Specialized Master's Programs  
foxms@temple.edu  
215-204-0574

## Healthcare Financial Management MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Human Resource Management MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Human Resource Management.

### About the Program

The Fox School of Business and Management offers the MS in Human Resource Management (MSHRM) degree program for those who want to pursue a career in Human Resource Management (HRM). The curriculum equips rising professionals with knowledge of advanced practices in critical HRM areas, an understanding of how those practices affect organizational success, and the ability to influence that success. The Fox MSHRM program is offered completely online and accommodates the busy schedules of our working students. With the accelerated completion pathway, students can earn their degrees in as few as 13 months. The curriculum meets industry standards set by the Society for Human Resource Management (SHRM).

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Online. Each course is delivered online over a five-week term. Each week, students participate in a live and collaborative web-conferencing session with faculty and classmates. Additional coursework and activities are required throughout the period.

**Full-Time/Part-Time Status:** The MSHRM is flexible and can accommodate both full- and part-time students.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MS in Human Resource Management is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. Graduates can expect to be qualified for such positions as:

- HR Business Partner
- HRM Strategic Leader
- Professional Development/E-Learning Manager/Director
- Program Director

- Senior Talent Management or Organization Development Consultant
- Talent Acquisition Manager/Director
- Total Rewards Manager/Director

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program or graduate certificate program.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program. Employers may provide tuition reimbursement as part of their benefit packages.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

#### Spring:

- August 1 – Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 1

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited university or college is required.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### Standardized Test Scores:

GRE/GMAT: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required. It must reflect a minimum of three years of professional leadership or Human Resource Management experience.

**Interview:** An interview, conducted either virtually or in person, is required. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MSHRM program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the department chair. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
HRM 5001	Leading Organizations	3
HRM 5051	Developing Human Resource Management Strategies	3
HRM 5115	Designing Talent Acquisition Systems	3
HRM 5116	Designing Strategic Reward Systems	3
HRM 5117	Leading within the Regulated Environment of HRM	3
HRM 5131	Ethical and Socially Responsible Decision-making	3
<b>Electives <sup>1</sup></b>		
Select four from the following:		12
HRM 5111	Influential Organizational Communication	
HRM 5112	Leading High Performing Teams	
HRM 5113	Power, Influence, and Negotiation	
HRM 5114	Building Human Capital	
HRM 5118	Leading Business Transformation	
HRM 5119	Human Resource Consulting	
HRM 5121	Leading Strategically: Trends, Analytics, and Impact	
HRM 5122	Leading with a Diversity, Equity, and Inclusion Perspective	
HRM 5155	Leading Virtual Organizations	
HRM 5170	Special Topics: Human Resource Management	
HRM 5180	Special Topics: Human Resource Management	
HRM 5182	Independent Study	
HRM 5190	Special Topics: Human Resource Management	
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

With approval from the Academic Director, students may alternately select any graduate-level course as an elective that complements, but does not substantially duplicate, any required core course.

**Culminating Event:** Successful completion of coursework is required to earn the MSHRM degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/human-resource-management-ms-bu-hrm-ms>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Academic Director:*

Debra L. Casey  
debra.casey@temple.edu  
215-204-4130

*Specialized Master's Programs Coordinator:*

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
foxms@temple.edu  
215-204-7678

## Information Technology Auditing and Cyber Security MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Information Technology Auditing and Cyber Security.

### About the Program

The MS in Information Technology Auditing and Cyber Security (MS ITACS) program prepares students for Information Technology (IT) risk management, cyber security and information systems auditing positions in business and critical infrastructure sectors of the economy identified by the U.S. Department of Homeland Security. The MS ITACS is a STEM program aligned with the ISACA® model curriculum for information security audit and control, which enables graduates to earn a three-year education experience waiver toward the Certified Information Systems Auditor (CISA®) designation.

Upon completion of the MS ITACS program, graduates are able to:

- Describe how an IT organization should be governed and managed.
- Explain how IT systems are implemented and recommend appropriate controls.

- Demonstrate how to protect an organization's information.
- Demonstrate the ability to conduct research related to emerging IT issues.
- Describe how IT services are delivered and maintained and recommend appropriate controls.
- Demonstrate an understanding of the IT audit process and apply it to business situation.
- Demonstrate an understanding of how organizations' systems are attacked and the skills used.
- Explain how organizations can mitigate cyber risks through prevention, detection and response.

MS ITACS students take five common core courses focused on IT governance and risk management and specialized courses in one of two concentrations: Information Technology Auditing or Cyber Security. The IT Auditing concentration culminates in a capstone course that prepares the student for the CISA® certification exam, while the capstone course for the Cyber Security concentration prepares the student for the Certified Information Systems Security Professional (CISSP®) certification exam. Qualified students with necessary prerequisites are able to take courses from both concentrations.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main and/or Online

**Full-Time/Part-Time Status:** The MS ITACS program can be completed on a full- or part-time basis.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MS ITACS program is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Areas of Specialization:** Two areas of concentration are offered:

- Cyber Security
- Information Technology Auditing

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. The MS ITACS degree prepares graduates for employment in IT risk management, cyber security and information systems auditing positions at accounting and consulting firms, banks and financial companies, businesses producing goods and providing services, computer software and hardware companies, information and data service providers, and governmental agencies and non-governmental organizations. The U.S. Bureau of Labor Statistics reports 35% job growth through 2031.

**Licensure/Certification:** Preparation for certification varies by area of concentration, as detailed below:

- **Certified Information Systems Auditor (CISA®):** The MS ITACS program's **IT Auditing** capstone course (MIS 5902) prepares students in the IT Auditing concentration to take the CISA® certification exam. The MS ITACS program does not require students to take the CISA® exam. This is optional. Experience required for CISA® certification is a minimum of five years of professional work experience in information systems auditing, control or security. A master's degree in information security, information systems or related field from an accredited university can be substituted

for three years of experience. For more information, visit <https://www.isaca.org/credentialing/cisa/get-cisa-certified>.

- Certified Information Systems Security Professional (CISSP®): The MS ITACS program's **Cyber Security** capstone course (MIS 5903) prepares students in the Cyber Security concentration to take the CISSP® certification exam. The MS ITACS program does not require students to take the CISSP® exam. This is optional. Experience required for CISSP® certification is a minimum of five years of cumulative paid work experience in *two or more of the eight domains* of the CISSP® Common Body of Knowledge (CBK). For more information, visit <https://www.isc2.org/certifications/cissp>.

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program or graduate certificate program.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

#### Spring:

- August 1 – Scholarship Deadline and International Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and can sometimes be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 1

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### Standardized Test Scores:

GRE/GMAT: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a

country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Upper-level graduate credits from an AACSB-accredited graduate business program, but not previously applied to a conferred degree, may be transferred into the MS ITACS program. The credits must be part of the required degree program at Temple University. To be transferred, the grade must be a "B" or better. The Admissions Committee makes recommendations for transferring credits to the department chair. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

## Information Technology Auditing Concentration

Code	Title	Credit Hours
<b>Core Courses</b>		
MIS 5202	IT Governance	3
MIS 5206	Protection of Information Assets	3
MIS 5214	Security Architecture	3
MIS 5687	Business Skills for ITACS Professionals I <sup>1</sup>	1.5
MIS 5688	Business Skills for ITACS Professionals II <sup>1</sup>	1.5
<b>IT Auditing Concentration Courses <sup>2</sup></b>		
MIS 5201	IT Audit Process	3
MIS 5203	Systems and Infrastructure Lifecycle Management <sup>1</sup>	3
MIS 5205	IT Service Delivery and Support	3
MIS 5208	Data Analytics for IT Auditors	3
<b>IT Auditing Elective <sup>3</sup></b>		
Select one from the following:		3
MIS 5121	Enterprise Resource Planning Systems	
MIS 5170	Special Topics	
MIS 5182	Independent Study	
<b>IT Auditing Capstone Course</b>		
MIS 5902	IT Auditing Capstone	3
<b>Total Credit Hours</b>		<b>30</b>

1

For our partner program with the Beijing National Accounting Institute (BNAI) in **China only**, students may substitute MIS 5287 Business Skills for ITACS Professionals (3 s.h.) for MIS 5687 Business Skills for ITACS Professionals I (1.5 s.h.) and MIS 5688 Business Skills for ITACS Professionals II (1.5 s.h.).

2

MIS 5122 Enterprise Architecture for IT Auditors (3 s.h.) may also be required of students who are admitted to the program but lack sufficient technical background.

3

Students in the Information Technology Auditing concentration alternately may select up to two courses from the Cyber Security concentration and/or in Computer Science and/or Engineering Security as electives. This is done in consultation with the ITACS Program Director.

## Cyber Security Concentration

Code	Title	Credit Hours
<b>Core Courses</b>		
MIS 5202	IT Governance	3
MIS 5206	Protection of Information Assets	3
MIS 5214	Security Architecture	3
MIS 5687	Business Skills for ITACS Professionals I	1.5
MIS 5688	Business Skills for ITACS Professionals II	1.5
<b>Cyber Security Concentration Courses</b>		
MIS 5211	Ethical Hacking	3
MIS 5213	Intrusion Detection & Response	3
MIS 5215	Operating System Security	3
MIS 5216	Organizational Forensics	3
MIS 5217	Network Security	3
<b>Cyber Security Elective(s) <sup>1</sup></b>		
Select one or more from the following, if desired: <sup>2</sup>		0
MIS 5170	Special Topics	
MIS 5182	Independent Study	
MIS 5212	Penetration Testing	
<b>Cyber Security Capstone Course</b>		
MIS 5903	Cyber Security Capstone	3
<b>Total Credit Hours</b>		<b>30</b>

1

Students in the Cyber Security concentration alternately may select up to two courses from the Information Technology Auditing concentration and/or in Computer Science and/or Engineering Security as electives. This is done in consultation with the ITACS Program Director.

2

Students earn credit for any elective course(s) taken. The Cyber Security concentration does not, however, require completion of an elective to earn the degree.

### Culminating Event:

#### Capstone Course:

The MS ITACS program culminates in a capstone that prepares students to take the appropriate professional certification examination:

- Certified Information Systems Auditor (CISA®)
- Certified Information Systems Security Professional (CISSP®), with a minimum of five years' experience

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/information-technology-auditing-and-cyber-security-ms-bu-itac-ms>

### Department Information:

Fox School of Business and Management

1801 Liacouras Walk

701 Alter Hall (006-22)

Philadelphia, PA 19122

foxinfo@temple.edu

215-204-5890

215-204-7678

Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

#### ITACS Academic Director:

David Lanter, PhD, GISP, CISA, CISSP

david.lanter@temple.edu

215-204-3077

#### Specialized Master's Programs Coordinator:

Rachel Carr

Senior Associate Director for Specialized Master's Programs

foxms@temple.edu

215-204-7678

## Innovation Management and Entrepreneurship MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Innovation Management and Entrepreneurship.

### About the Program

In these challenging times, innovation is more important than ever, and it is critical that business professionals understand how to creatively solve problems and turn challenges into opportunities. Innovation and entrepreneurship are ubiquitous in today's competitive landscape. For firms to thrive, they must invent groundbreaking new products; think outside the box in order to deliver services with unparalleled value; fundamentally rework their internal activities and processes to create competitive advantage; and reinvent the game by diving into so-called "blue oceans" and "white spaces" with new business models. As open innovation perspectives come to be fully embraced by organizations, entire business ecosystems are fundamentally shifting and competition becomes value chain against value chain, not company against company.

The Master of Science in Innovation Management and Entrepreneurship (IME MS) program teaches students to shift their perspectives to develop a deep understanding of strategy, innovation, creativity and entrepreneurial thinking, as well as to develop relevant management skills necessary to effectively manage innovation in existing companies and/or to successfully found new entrepreneurial ventures. Because diverse perspectives and backgrounds enhance creativity and innovation, we welcome applicants with several years of working experience and students applying directly out of undergraduate programs. Transform yourself, your company and your ideas with an MS in Innovation Management and Entrepreneurship.

The IME MS includes 9 credits of electives that allow students to tailor the program to their interests, background and goals. Students can take core MBA courses to fulfill these 9 credits and balance broad business acumen with a deep understanding of innovation and entrepreneurship. Alternatively, they can take other innovation and entrepreneurship courses, consulting courses or other Fox elective courses open to MS students. Finally, students can take up to 6 credits from other graduate programs outside of the Fox School that complement their IME MS coursework and help them achieve their career objectives. This often works well for entrepreneurs looking to launch ventures that require specific expertise or skills taught in other schools and colleges across Temple.

The IME MS is designed for:

- Working professionals who want to move into strategic leadership roles.
- Entrepreneurs who aim to create high-growth, innovative or technology-focused companies. In March 2021, our first IME MS alum appeared on Shark Tank. Congratulations, Jared!
- Mission-driven professionals who want to solve societal problems with multi-bottom-line social impact organizations or nonprofits.
- MBA dual-degree students who recognize the important ways that innovative perspectives complement traditional management approaches and who want to differentiate themselves from other graduates.
- Undergraduate or graduate students as well as faculty from technical or scientific disciplines who want to develop complementary skills and perspectives in innovation and entrepreneurship, commercialize a technology, or work in R&D/innovation leadership roles.
- Students from the arts or other areas who are interested in launching a freelancing business or entrepreneurial venture or interested simply in learning the business side of creative industries.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Center City, Main, Online. All courses are offered in both online and hybrid in-person course formats designed to balance efficiency and impact, learning and relevant practice. Classes are scheduled in the evenings and on weekends and designed to meet the working professional's schedule or for a student taking classes full time.

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Full-time study requires a minimum course load of 9 credits. Part-time students typically complete the program in two or three years, taking courses as their schedule and finances permit.

**Interdisciplinary Study:** This uniquely collaborative program includes artists, businesspeople, designers, engineers, lawyers, scientists and professionals from various backgrounds. Courses are taken by Fox MBA,

Engineering Management MS, and Bioinnovation PSM students and are offered as electives for graduate students across Temple.

The IME MS has been approved as a dual-degree program with all of the Fox School MBA programs. In completing a dual-degree program, students can count up to 15 credits of coursework toward the completion of the two degrees. Students must declare the dual degree prior to graduation from their first degree.

In addition, the IME MS is closely tied to Temple's Innovation and Entrepreneurship Institute (IEI), which offers a wide range of co-curricular programs, mentoring, a members-only co-working space, an accelerator, multiple annual competitions and more.

**Accreditation:** The MS in Innovation Management and Entrepreneurship is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** Depending in part on their prior experience, degrees and expertise, IME MS graduates are prepared for employment in a variety of areas, including but not limited to:

- Consulting
- Corporate new venture, accelerator/incubator program, and design and innovation teams
- Entrepreneurial ecosystem accelerators, incubators, makerspaces or venture capital firms
- Founders of for-profits or nonprofits
- Innovation and engineering management
- Leadership, management and/or strategy
- New product development
- Technical sales and strategic marketing
- Technology commercialization and scouting

**Licensure/Certification:** Coursework prepares students to take the New Product Development Professional (NPDP) certification exam offered by the Product Development and Management Association (PDMA). In addition, students have the option to take courses to achieve certification as a Lean Six Sigma Green Belt by the International Association for Six Sigma Certification (IASSC).

**Non-Matriculated Student Policy:** This program requires the student to be matriculated in the degree program or graduate certificate program.

**Financing Opportunities:** Merit- and need-based scholarships are available and are awarded based on application strength.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

#### Spring:

- August 1 – Scholarship Deadline and International Deadline
- November 1 – Final Deadline

Applicants who have not assembled their complete application for the IME MS program in time for an upcoming application deadline are

encouraged to apply to one of our certificate programs. Credits taken in our Innovation Management and Entrepreneurship graduate certificate (p. 157) program can be transferred to the IME MS.

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis.

APPLY ONLINE to this Fox graduate program.

#### Letters of Reference:

Number Required: 1

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

#### Standardized Test Scores:

GMAT/GRE: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** An interview is conducted after an application has been submitted and reviewed. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

## Program Requirements

#### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
BA 5687	Advanced Professional Development Strategies <sup>1</sup>	0
SGM 5137	Entrepreneurial Thinking and New Venture Creation	3
SGM 5138	Global Innovation Strategy: Creating Agile, Innovative, Globally-Competitive Organizations	3

SGM 5139	Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas	3
SGM 5142	Business Model Innovation	3
SGM 5144	Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges	3
SGM 5145	Plan, Pitch, and Fund an Entrepreneurial Start-Up	3
SGM 5148	Open Innovation and Managing Strategic Alliances	3
<b>Electives</b>		
Select three from the following: <sup>2</sup>		9
BA 5002	Socioeconomic Context of Business	
BA 5685	Internship or Externship in Business <sup>3</sup>	
HRM 5001	Leading Organizations	
HRM 5131	Ethical and Socially Responsible Decision-making	
SGM 5051	Business Strategy in a Global Environment	
SGM 5103	Management of Technology and Innovation	
SGM 5135	Innovation Intelligence: Plan, Build, Protect, and Monetize a Technology / Innovation Portfolio	
SGM 5182	Independent Study <sup>3</sup>	
SGM 5190	Special Topics: General & Strategic Management <sup>3</sup>	
STAT 5602	Visualization: The Art of Numbers and the Psychology of Persuasion	

**Total Credit Hours** **30**

1

BA 5687 may be waived based on prior academic or professional preparation. Students should consult with the Academic Director.

2

Three courses are required. Alternate courses may be taken with permission from the Academic Director.

3

Permission from the Academic Director is required to enroll in BA 5685, SGM 5182 and/or SGM 5190 as an elective.

**Internships/Externships:** Project-based internships, which are undertaken on-site, and externships, which engage the student off-site, are available for students in the IME MS. These can be valuable to those looking to expand their work experience or portfolio as well as for individuals looking to change careers or industries. More than 40 internships/externships are typically available each academic term across a range of industries and variety of different types of companies.

**Culminating Event:** Successful completion of coursework is required to earn the IME MS degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/innovation-management-and-entrepreneurship-ms-bu-ime-ms>

### Department Information:

Innovation and Entrepreneurship Institute (IEI)  
mgmtdept@temple.edu



## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

*Director, Temple University Entrepreneurship Academy:*

Alan B. Kerzner

alan.kerzner@temple.edu

215-204-8188

*Course Registration:*

Rachel Carr

Senior Associate Director for Specialized Master's Programs

foxms@temple.edu

215-204-7678

## Management MiM

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master in Management.

## About the Program

Developed for recent college graduates with business and non-business degrees, the Master in Management (MiM) delivers a comprehensive introduction to the world of business and equips students to become managers, leaders and problem solvers at globally focused firms. This program, taught by industry experts, is designed for students looking to supplement their undergraduate degree with the knowledge that today's employers demand in an effort to increase their career marketability.

The MiM program is only offered at Temple University's Japan campus.

**Time Limit for Degree Completion:** The MiM program is designed to be completed on a full-time basis with a cohort in one year, although Graduate School guidelines allow for up to six years for completion of the master's degree.

**Campus Location:** Temple University Japan only

**Full-Time/Part-Time Status:** The program is designed to be completed on a full-time basis with a cohort. Classes are held in the evening to accommodate internships and other obligations.

**Accreditation:** The MiM program is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Non-Matriculated Student Policy:** The MiM program is a cohort program, and courses may not be taken on a non-matriculated basis.

**Financing Opportunities:** United States Federal Student Aid is available only to U.S. citizens or permanent residents of the United States. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program. Scholarship funds are limited. For more information, visit <https://www.tuj.ac.jp/mim/tuition>.

## Admission Requirements and Deadlines

### Application and Student Visa Application Deadline:

*For Fall 2024 Admission:*

- January 25 – Earliest Date to begin work on student Visa Application if seeking a student visa through TUJ
- February 28 – Early Admissions Deadline for Application
- April 15 – Application Deadline if seeking a student visa through TUJ
- April 25 – Visa Deadline if seeking a student visa through TUJ. Applicants who do not have permission to reside in Japan through citizenship or a prior long-term visa must apply for a student visa through TUJ.
- June 30 – Final Application Deadline if not seeking a student visa through TUJ

The cost to apply is ¥12,000. An email with payment instructions is sent to applicants after submission of the online application form.

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Professional references from an immediate supervisor, current or past, are preferred. Academic references are acceptable.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the online application portal.

### Standardized Test Scores:

GRE/GMAT: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually.

**Transfer Credit:** Transfer credit is not accepted for the MiM.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Year 1		Credit Hours
Fall		
Mid-August Pre-Term (2 weeks)		
BA 5411	Business Fundamentals I	3
Full Term		
ACCT 5411	Financial and Managerial Accounting in Decision Making	3
BA 5412	Business Fundamentals II	3
HRM 5411	Managing People	3
MIS 5411	Business Intelligence and Data Visualization	3
<b>Credit Hours</b>		<b>15</b>
Spring		
BA 5687	Advanced Professional Development Strategies	0
FIN 5411	Financial Management	3
MKTG 5411	Marketing Management	3
SGM 5411	Organizational Strategy	3
Elective <sup>1</sup>		3
<b>Credit Hours</b>		<b>12</b>
Summer		
BA 5486	Capstone Experience: Internship <sup>2</sup>	3
or		
BA 5487	Capstone Project	
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Students select an elective from an approved list of courses.

2

Students who are employed may select an immersion course or other elective on the approved list in consultation with the Academic Director.

**Culminating Event:** Successful completion of coursework is required to earn the MiM degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/management-mim-bu-man-mim>

<https://www.tuj.ac.jp/mim>

### U.S. Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Japan Department Information:

Fox Master in Management Program  
1-14-29 Taishido, Setagaya-ku  
Tokyo, Japan 154-0004

tujbusiness@tuj.temple.edu  
+81-3-5441-9800

## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

*Assistant Dean, International Business Programs:*  
William J. Swinton  
swinton@tuj.temple.edu  
+81-3-5441-9800 x9120

*MiM Program Development Coordinator:*

Eriko Kawaguchi  
eriko.kawaguchi@tuj.temple.edu  
+81-3-5441-9800

## Management Information Systems MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Marketing Research and Analytics MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Quantitative Finance and Risk Management MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Master of Science in Quantitative Finance and Risk Management.

### About the Program

Through the Master of Science in Quantitative Finance and Risk Management, students develop expertise in quantitative modeling, risk management and data science principles and in the best industry practices driving the financial services industry today. This 30-credit master's degree program is the only one in the Greater Philadelphia region offering the ideal way to pursue the professional Financial Risk Manager (FRM) designation and a prestigious master's degree simultaneously.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time students are able to complete the degree program in 10 or 22 months, while part-time students taking 8 or fewer credits per term are able to complete the program in two years.

**Affiliation(s):** Research interests of Fox faculty are supported by numerous centers and institutes throughout the Fox School and Temple University.

**Accreditation:** The MS in Quantitative Finance and Risk Management is accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

**Job Prospects:** The Fox Center for Student Professional Development (CSPD) provides students with career coaching and professional development resources that support the job search. Graduates are distinctly qualified to contribute in quantitative analysis areas in the financial services industry, including financial modeling, financial risk management, information technology, portfolio management and securities trading roles.

**Non-Matriculated Student Policy:** Students are not allowed to take classes under non-matriculated status.

**Financing Opportunities:** Citizens and permanent residents of the United States are considered domestic students and are typically eligible for federal student loans and alternative loans through private lenders. The Fox School grants 5% tuition scholarships to alumni who are admitted to the program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

- December 15 – Early Admissions Deadline
- March 1 – Scholarship Deadline and International Deadline
- June 30 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline on a space-available basis.

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required:* 1

*From Whom:* Academic references and/or professional references from an immediate supervisor, current or past, are accepted.

**Coursework Required for Admission Consideration:** Coursework is required in multivariate calculus (Calculus 3) with a grade of "B" or better earned.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** Essay prompts can be found in the application portal.

### Standardized Test Scores:

GMAT/GRE: Scores may be requested based on the applicant's academic and/or professional background. Candidates with an

undergraduate GPA below 3.0 are required to submit valid GMAT or GRE test scores. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV is required.

**Interview:** Candidates are invited to interview in person or virtually. Interviews are required on a case-by-case basis.

**Writing Sample:** Prompts for this optional essay can be found in the online application portal.

**Transfer Credit:** Transfer credit is not accepted for the Quantitative Finance and Risk Management MS program.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*<sup>1</sup>

Year 1		Credit Hours
Fall		
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
FIN 5607	Stochastic Calculus & Finance	1
Fall Term		
FIN 5601	Financial Technology	1
FIN 5612	Asset Pricing	1.5
FIN 5614	Continuous Time Finance	1.5
FIN 5615	Data Science in Finance	1.5
FIN 5619	Quant Fixed Income	1.5
FIN 5624	Numerical Methods	1.5
FIN 5627	Financial Econometrics	1.5
FIN 5629	Value at Risk	1.5
FIN 5673	Financial Risk Management I	1.5
FIN 5675	Professional Development	1
<b>Credit Hours</b>		<b>18</b>
Spring		
FIN 5622	Machine Learning in Finance	1.5
FIN 5631	Financial Time Series	1.5
FIN 5634	Stochastic Volatility	1.5
FIN 5639	Quantitative Risk Modeling	1.5
FIN 5646	Frontiers in Quantitative Finance	1.5
FIN 5648	Quantitative Portfolios	1.5

FIN 5649	Enterprise Risk Management	1.5
FIN 5674	Financial Risk Management II	1.5
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>30</b>

1

With approval from the Academic Director, FIN 5683 Special Study in Finance or non-FIN graduate courses may be substituted for any required course.

## 10-Month Full-Time MS

Year 1		
Fall		Credit Hours
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5604	Derivative Markets	1
FIN 5605	Fixed Income	1
FIN 5607	Stochastic Calculus & Finance	1
Fall I		
FIN 5612	Asset Pricing	1.5
FIN 5614	Continuous Time Finance	1.5
FIN 5619	Quant Fixed Income	1.5
FIN 5673	Financial Risk Management I	1.5
FIN 5675	Professional Development	1
Fall II		
FIN 5601	Financial Technology	1
FIN 5615	Data Science in Finance	1.5
FIN 5624	Numerical Methods	1.5
FIN 5627	Financial Econometrics	1.5
FIN 5629	Value at Risk	1.5
<b>Credit Hours</b>		<b>18</b>
Spring		
Spring I		
FIN 5631	Financial Time Series	1.5
FIN 5634	Stochastic Volatility	1.5
FIN 5639	Quantitative Risk Modeling	1.5
FIN 5648	Quantitative Portfolios	1.5
Spring II		
FIN 5622	Machine Learning in Finance	1.5
FIN 5646	Frontiers in Quantitative Finance	1.5
FIN 5649	Enterprise Risk Management	1.5
FIN 5674	Financial Risk Management II	1.5
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>30</b>

## 22-Month Full-Time MS <sup>1</sup>

Year 1		
Fall		Credit Hours
Finance Academy, August		
FIN 5604	Derivative Markets	1
FIN 5607	Stochastic Calculus & Finance	1

Fall I		
FIN 5612	Asset Pricing	1.5
FIN 5614	Continuous Time Finance	1.5
FIN 5675	Professional Development	1
Fall II		
FIN 5615	Data Science in Finance	1.5
FIN 5627	Financial Econometrics	1.5
<b>Credit Hours</b>		<b>9</b>
Spring		
Spring I		
FIN 5631	Financial Time Series	1.5
FIN 5634	Stochastic Volatility	1.5
FIN 5648	Quantitative Portfolios	1.5
Spring II		
FIN 5622	Machine Learning in Finance	1.5
FIN 5646	Frontiers in Quantitative Finance	1.5
FIN 5673	Financial Risk Management I	1.5
<b>Credit Hours</b>		<b>9</b>
Year 2		
Fall		
Finance Academy, August		
FIN 5602	Corporate Finance	1
FIN 5605	Fixed Income	1
Fall I		
FIN 5601	Financial Technology	1
FIN 5619	Quant Fixed Income	1.5
FIN 5674	Financial Risk Management II	1.5
Fall II		
FIN 5624	Numerical Methods	1.5
FIN 5629	Value at Risk	1.5
<b>Credit Hours</b>		<b>9</b>
Spring		
Spring I		
FIN 5639	Quantitative Risk Modeling	1.5
Spring II		
FIN 5649	Enterprise Risk Management	1.5
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>30</b>

1

This full-time program can be modified for part-time study. In the part-time 22-month program, students reduce their courseload in the Spring term of their first year of study to 6 credits and increase their courseload to 6 credits in the Spring term of their second year. Contact the Academic Director for the 22-month part-time schedule for the Quantitative Finance and Risk Management MS.

**Culminating Event:** Successful completion of coursework is required to earn the MS in Quantitative Finance and Risk Management degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/quantitative-finance-and-risk-management-ms-bu-qfrm-ms>

### Department Information:

Fox School of Business and Management  
 1801 Liacouras Walk  
 701 Alter Hall (006-22)  
 Philadelphia, PA 19122  
 foxinfo@temple.edu  
 215-204-5890  
 215-204-7678  
 Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Academic Director:*  
 John Soss, CFA, FRM  
 jsoss@temple.edu  
 215-204-8453

*Specialized Master's Programs Coordinator:*  
 Rachel Carr  
 Senior Associate Director for Specialized Master's Programs  
 foxms@temple.edu  
 215-204-7678

## Real Estate MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Risk Management and Insurance MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Statistics MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is *not open for direct admission*. The Master of Science in Statistics is awarded to a student enrolled in the Doctor of Philosophy

(PhD) program in Statistics who successfully completes 30 credits of required coursework but chooses to not continue in the PhD program.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
STAT 8001	Probability and Statistics Theory I	3
STAT 8002	Probability and Statistics Theory II	3
STAT 8003	Statistical Methods and Concepts	3
STAT 8004	Statistical Modeling and Inference	3
<b>Electives <sup>1</sup></b>		<b>18</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Students select graduate business elective courses in consultation with the Director of the Graduate Program in Statistical Science.

## Statistics PhD

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the Doctor of Philosophy in Statistics.

### About the Program

The general purpose of the graduate programs in Statistics is to provide statisticians with a broad base in the theories and methods of statistics toward successful application of statistical tools to immediate and specific problems that arise in virtually every area of societal and scientific endeavors. Admitted students pursue graduate study that is balanced appropriately between theory and methods. They are expected to gain experience in the application of statistics through research assistantships, statistical consulting, applications-oriented courses and/or through outside employment, including internships.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program is completed on a full-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interests in business, biology and health sciences.

**Areas of Specialization:** Faculty members specialize and offer substantial coursework in the following areas:

- Applications of statistics to the law
- Asymptotic theory
- Bayesian inference/empirical Bayesian inference
- Causal inference
- Clinical trials
- Design of experiments

- Inequalities in statistics
- Linear and generalized linear models
- Methods in AIDS research and teratology
- Multiple comparisons
- Multivariate analysis
- Parametric and nonparametric inference
- Pharmaceutical statistics
- Quality control
- Ranking and selection
- Resampling methods
- Robust inference
- Statistical computing and graphics
- Sufficient dimension reduction
- Survey sampling
- Survival analysis
- Time series

**Job Prospects:** The program is dedicated to producing well-trained statisticians who work as researchers in academia, industry and government.

**Non-Matriculated Student Policy:** Qualified non-matriculated students are permitted to take doctoral courses.

**Financing Opportunities:** Typically, all PhD students receive financial assistantship in the form of full tuition remission and a stipend in return for offering services as a Research Assistant (RA) or Teaching Assistant (TA). The level of support is based on the concentration, the applicant's qualifications and other competitive considerations. Students may also receive remuneration for conference travel, publications and academic achievement.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

*Applications must be submitted AND complete (i.e., all required materials must be received and verified by Fox Staff) by Dec. 5 to be considered. Applications received after this deadline are reviewed on a case-by-case basis and dependent on availability.*

APPLY ONLINE to this Fox graduate program.

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** The equivalent of a four-year U.S. baccalaureate degree from an accredited university or college is required. For three-year degrees, mark sheets must be evaluated by WES or another NACES organization.

**Statement of Goals:** In 500 to 1,000 words, describe your specific interest in Temple's program, research goals, career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Required. Test results cannot be more than five years old. Although the applicant's test score is an important factor in the admissions process, other factors, such as the ability to conduct research as demonstrated by academic research publications and whether your indicated research interests match with those of our faculty, are also taken into consideration.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 7.0
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 48*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
STAT 8001	Probability and Statistics Theory I	3
STAT 8002	Probability and Statistics Theory II	3
STAT 8003	Statistical Methods and Concepts	3
STAT 8004	Statistical Modeling and Inference	3
STAT 9001	Advanced Statistical Inference I	3
STAT 9002	Advanced Statistical Inference II	3
<b>Electives</b>		
Select eight from the following, with at least two courses taken at the 9000 level: <sup>1</sup>		
STAT 8031	Probability and Large Sample Theory	
STAT 8101	Stochastic Processes	
STAT 8102	High Dimensional Inference	
STAT 8103	Sampling Theory	
STAT 8104	Mathematics for Statistics	
STAT 8105	Univariate Time Series Analysis	
STAT 8106	Linear Models I	
STAT 8107	Design of Experiments I	
STAT 8108	Applied Multivariate Analysis I	
STAT 8114	Survival Analysis I	
STAT 8115	Nonparametric Methods	
STAT 8116	Categorical Data Analysis	
STAT 8117	Clinical Trials	
STAT 8121	Statistical Computing and Optimization	
STAT 8123	Time Series Analysis and Forecasting	

STAT 9101	Multivariate Time Series Analysis	
STAT 9103	Stat Lrng & Data Mining	
STAT 9106	Linear Models II	
STAT 9107	Design of Experiments II	
STAT 9108	Multivariate Analysis II	
STAT 9114	Survival Analysis II	
STAT 9116	Statistical Genetics: An Advanced Graduate Course	
STAT 9180	Seminar in New Topics in Statistics	
STAT 9190	Seminar in New Topics in Statistics	
<b>Research Courses<sup>2</sup></b>		<b>6</b>
STAT 9994	Preliminary Examination Preparation	
STAT 9998	Pre-Dissertation Research	
STAT 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

With prior approval from the Director of Graduate Programs in Statistical Science, students may select electives outside of Statistics.

2

A minimum of 2 credits of STAT 9999 must be taken. The remaining 4 credits may be earned in any combination of STAT 9994, STAT 9998 and/or STAT 9999.

**Additional Requirement:** Completion of a Summer research paper is required.

#### **Culminating Events:**

##### *Statistics Competency Examination:*

An assessment of students' proficiency in statistical theory and methodology is made at the end of their first year in the program with an exam offered in June. Students who fail the statistics competency examination on the first attempt must sit for reexamination prior to the Fall term of their second year. A second failure results in dismissal from the University. No third attempt is allowed.

##### *Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge of current research. The subject areas are determined, in advance, by the faculty of the department. The preliminary exam should be completed no more than one term after the student completes the coursework component of the program. Students who are preparing to write their preliminary examinations should confirm a time and date with their departmental advisor.

The members of the student's department write the questions for the preliminary exam. The student must answer every question on the examination in order to be evaluated by the Department Committee. The evaluators look for a breadth and depth of understanding of specific research areas, a critical application of that knowledge to specific phenomena, and an ability to write technical prose. Each member votes to pass or fail the student. In order to pass, a majority of the committee members must agree that the exam has been satisfactorily completed.

##### *Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem,

an exhaustive survey and review of literature related to the problem, and a detailed methodological plan for investigating the problem.

The proposal should be completed and approved no more than one year after completing coursework. Upon approval, a timeline for completing the investigation and writing process is established.

##### *Dissertation:*

The doctoral dissertation is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standard of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the student's department. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation. This committee is comprised of the Doctoral Advisory Committee and at least one additional faculty member from outside the department.

If any member decides to withdraw from the committee, the student shall notify the Chair of the Dissertation Examining Committee and the Director of Graduate Programs in Statistical Science. The student, in consultation with the Chair, is responsible for finding a replacement. Inability to find a replacement shall constitute evidence that the student is unable to complete the dissertation. In such a case, the student may petition the Director of Graduate Programs in Statistical Science for a review. Once review of the facts and circumstances is completed, the Director rules on the student's progress. If the Director rules that the student is not capable of completing the dissertation, the student is dismissed from the program. This decision may be appealed to the Senior Associate Dean. If dismissed, the student may appeal to the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Secretary at least 15 days before the defense is to be scheduled. The Graduate Secretary arranges the time, date and room within two working days, and forwards to the student the appropriate forms. After the Graduate Secretary has scheduled the defense, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense. The department posts flyers announcing the defense, and the Graduate School announces the defense on its website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/statistics-phd-bu-stat-phd>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Admissions:*  
Fox PhD Admissions  
foxphdo@temple.edu

*Dept. of Statistics, Operations and Data Science:*  
Samar Khan  
Assistant Director, MS Business Analytics and Data Science Programs  
tuk61738@temple.edu  
215-204-6309

*Graduate Program Director:*  
Dr. Chengyong Tang  
yongtang@temple.edu  
215-204-3191

## Statistics and Data Science MS

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Graduate Certificate: Business Administration

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Certificate

This graduate certificate is not open for enrollment for the 2023-2024 academic year.

## Graduate Certificate: Business Analytics

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the graduate certificate in Business Analytics.

### About the Certificate

The graduate certificate in Business Analytics, offered by the Department of Statistics, Operations and Data Science in the Fox School, fosters deep analytical skills needed to use analysis of big data to make effective decisions. Students learn to understand descriptive, predictive and prescriptive analytics; recognize when each is appropriate; and understand the fundamental methods and techniques used in each method. They are also prepared to:

- understand applications, assumptions and limitations of business-analytic models and techniques,
- develop expertise in the use and application of analytical tools and software,
- obtain information and insight from datasets of varying complexity, and
- effectively communicate insights and results of analyses in relevant managerial terms.

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Fox School's admissions advisor for more information.

### Admission Requirements and Deadlines

#### Application Deadline:

##### Fall:

- December 15 – Early Admissions Deadline
- June 30 – Final Deadline

##### Spring:

- August 1 – Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

**Bachelor's Degree:** A baccalaureate degree from an accredited university or college is required. Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English.

**Statement of Goals:** In 250 words or less, describe your goals and motivations for pursuing this certificate program.

**Resume:** Current resume or CV is required.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*



Code	Title	Credit Hours
<b>Core Courses</b>		
STAT 5001	Quantitative Methods for Business	3
STAT 5602	Visualization: The Art of Numbers and the Psychology of Persuasion	3
<b>Electives</b>		
Select two from the following:		6
STAT 5603	Statistical Learning and Data Mining	
STAT 5604	Experiments: Knowledge by Design	
STAT 5605	Decision Models: From Data to Decisions	
STAT 5606	Data: Care, Feeding, and Cleaning in Python	
STAT 5607	Advanced Business Analytics	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-analytics-certificate-graduate-bu-busa-grad>

### Department Information:

Fox School of Business and Management  
329 Speakman Hall  
1810 N. 13th Street  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Academic Director:*

Eric Eisenstein  
527 Alter Hall  
eric.eisenstein@temple.edu  
215-204-7039

*Course Registration:*

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
rcarr@temple.edu  
215-204-0574

## Graduate Certificate: Corporate Instructional Design

FOX SCHOOL OF BUSINESS AND MANAGEMENT

## About the Certificate

This graduate certificate is not open for enrollment for the 2023-2024 academic year.

## Graduate Certificate: Diversity, Equity and Inclusive Leadership in Organizations

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the graduate certificate in Diversity, Equity and Inclusive Leadership in Organizations.

## About the Certificate

We recognize this truth: Our organizations are increasingly diverse with employees of various ethnicities, generations, genders and sexual orientations, religious beliefs, backgrounds and histories, partnerships, and values cooperating in support of personal and organizational goals. Our organizational leaders must embrace this world and facilitate a future that respectfully acknowledges those differences and builds a culture of equity. One of the keys to this future is inclusive leadership beliefs and practices. Our graduate certificate in Diversity, Equity and Inclusive Leadership in Organizations is designed to increase the skills of managers and team members in utilizing these key practices.

Coursework allows students to develop their own perspectives on diversity and equity and begin to model inclusive leadership practices. Students explore the larger context of leadership, the variety of individual differences that contribute to a diverse environment, the importance of understanding one's colleagues and tailoring one's communication to their needs, and the laws and public policy issues related to diversity and equality.

All courses are delivered online and include virtual classroom meetings with a Fox School faculty member and student-classmates. Rigorous hands-on courses are taught by faculty who are leaders in their fields and businesspeople who have managerial and leadership experience. Participants also have the option to transfer credits earned into a Fox graduate degree program, such as the Human Resource Management MS (p. 137).

The Diversity, Equity and Inclusive Leadership in Organizations certificate program is appropriate for:

- individual contributors who seek a leadership role, and
- general managers who would like to develop inclusive leadership practices.

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Fox School's admissions advisor for more information.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

- December 15 – Early Admissions Deadline
- June 30 – Final Deadline

*Spring:*

- August 1 – Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited university or college is required. Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English.

**Statement of Goals:** In 250 words or less, describe your goals and motivations for pursuing this certificate program.

**Resume:** Current resume or CV is required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
HRM 5001	Leading Organizations	3
HRM 5111	Influential Organizational Communication	3
HRM 5117	Leading within the Regulated Environment of HRM	3
HRM 5122	Leading with a Diversity, Equity, and Inclusion Perspective	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/diversity-equity-and-inclusive-leadership-in-organizations-certificate-graduate-bu-deil-grad>

### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

*Academic Director:*  
Kelly Grace, JD, PhD  
kelly.grace@temple.edu  
215-204-1621

*Course Registration:*  
Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
foxms@temple.edu  
215-204-0574

## Graduate Certificate: Healthcare Innovation Management

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the graduate certificate in Healthcare Innovation Management.

## About the Certificate

The graduate certificate in Healthcare Innovation Management gives healthcare leaders the tools to become innovative thinkers more focused on non-traditional approaches to healthcare delivery.

This certificate is designed for working professionals, and is jointly run by the Department of Risk, Actuarial Science and Legal Studies and the Department of Management in the Fox School of Business and Management. Rigorous, hands-on courses are taught by faculty who are leaders in their fields and businesspeople who have implemented ideas into practice.

Students who undertake the certificate have the option to transfer credits earned into our other graduate degree programs, such as the Innovation Management and Entrepreneurship MS, the MBA in Business Administration/Health Sector Management, or the Health Administration MHA.

Four focal areas that serve a diverse range of healthcare professionals are available within the Innovation Management and Entrepreneurship coursework required to be completed as part of this certificate:

- Creative Problem-Solving and Innovating, which solves everyday problems in healthcare or hospital settings, improves operations, enhances patient outcomes, and offers connections to stakeholder groups;
- Designing and Building Next-Generation Organizations, which balances productivity with innovation, identifies connections to regional ecosystems, and understands macro-level trends that are changing and often disrupting healthcare;
- Entrepreneurship, which encourages entrepreneurial thinking within the organization, understands new models for multi-bottom-line organizations focused on social impact, and identifies connections with the entrepreneurial ecosystem; and

- New Product Development, which demonstrates running innovation or technology, as well as research and development programs, projects or teams.

**Campus Location:** Main, Center City, Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Fox School's admissions advisor for more information.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

- December 15 – Early Admissions Deadline
- June 30 – Final Deadline

*Spring:*

- August 1 – Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

**Bachelor's Degree:** A baccalaureate degree from an accredited university or college is required. Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English.

**Statement of Goals:** In 250 words or less, describe your goals and motivations for pursuing this certificate program.

**Resume:** Current resume or CV is required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Health Sector Management Courses</b>		
HCM 5101	Health Systems Organization and Development <sup>1</sup>	3
RMI 5103	Health Risks	3
<b>Innovation Management and Entrepreneurship Courses</b>		
Select two courses within one of the four focal areas identified below: 6		
Creative Problem-Solving and Innovating		
SGM 5131	Social Entrepreneurship - Innovative Approaches to Achieving Positive Social Impact	
	or SGM 5144 Business Model Innovation	
SGM 5144	Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges	
Designing and Building Next-Generation Organizations		

SGM 5135 Innovation Intelligence: Plan, Build, Protect, and Monetize a Technology / Innovation Portfolio  
 or SGM 5144 Business Model Innovation  
 or SGM 5144 Open Innovation and Managing Strategic Alliances

SGM 5138 Global Innovation Strategy: Creating Agile, Innovative, Globally-Competitive Organizations

### Entrepreneurship

SGM 5131 Social Entrepreneurship - Innovative Approaches to Achieving Positive Social Impact  
 or SGM 5139 Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas  
 or SGM 5144 Plan, Pitch, and Fund an Entrepreneurial Start-Up

SGM 5137 Entrepreneurial Thinking and New Venture Creation

### New Product Development

SGM 5103 Management of Technology and Innovation

SGM 5139 Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas

or SGM 5144 Business Model Innovation

### Total Credit Hours

12

1

HCM 5101 is only offered in the Fall term.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/healthcare-innovation-management-certificate-graduate-bu-hcim-grad>

### Department Information:

Dept. of Risk, Actuarial Science and Legal Studies and Dept. of Management  
 mgmtdept@temple.edu

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Faculty Directors:*

Barbara Manaka, PhD, RN  
 Programs in Healthcare Management  
 barbara.manaka@temple.edu  
 215-204-4963

Alan B. Kerzner  
 Director, Temple University Entrepreneurship Academy  
 alan.kerzner@temple.edu  
 215-204-8188

*Course Registration:*

Rachel Carr  
 Senior Associate Director for Specialized Master's Programs  
 foxms@temple.edu

215-204-0574

## Graduate Certificate: Human Resource Management

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the graduate certificate in Human Resource Management.

### About the Certificate

People are a critical component of all organizations. They are the ones who produce the products, serve the customers, verify the financial statements, attract the customers, develop the innovations, and manage the enterprise. Human Resource Management (HRM) plays a crucial role in this arena with its strategies and tactics of:

- attracting and selecting from a diverse talent pool and developing that talent for continued growth and engagement;
- creating motivation and reward systems that support individual and organizational goals;
- ensuring talent retention; and
- ultimately, generating important individual and organizational outcomes.

The focus of this graduate certificate is to equip rising professionals with knowledge of advanced practices in critical HRM areas and an understanding of how those practices affect organizational success. It is designed for both career accelerators and career changers. Courses are delivered online and include virtual classroom meetings with a Fox School faculty member and student-classmates. Rigorous hands-on courses are taught by faculty who are leaders in their fields and businesspeople who have led HR groups. Participants also have the option to transfer credits earned into a Fox graduate degree program, such as the Human Resource Management MS.

The HRM certificate program is appropriate for:

- human resource practitioners seeking to enhance their careers with new strategies and cutting-edge knowledge,
- general managers who strive to transition to an HRM career, and
- general managers who want to deepen their understanding of HRM practices to become better managers.

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Fox School's admissions advisor for more information.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:*

- December 15 – Early Admissions Deadline
- June 30 – Final Deadline

*Spring:*

- August 1 – Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited university or college is required. Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English.

**Statement of Goals:** In 250 words or less, describe your goals and motivations for pursuing this certificate program.

**Resume:** Current resume or CV is required.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
HRM 5051	Developing Human Resource Management Strategies	3
HRM 5115	Designing Talent Acquisition Systems	3
HRM 5116	Designing Strategic Reward Systems	3
HRM 5117	Leading within the Regulated Environment of HRM	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/human-resource-management-certificate-graduate-bu-hrm-grad>

#### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

#### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

#### Department Contacts:

*Academic Director:*  
Kelly Grace, JD, PhD  
kelly.grace@temple.edu  
215-204-1621

*Course Registration:*

Rachel Carr  
 Senior Associate Director for Specialized Master's Programs  
 foxms@temple.edu  
 215-204-0574

# Graduate Certificate: Information Technology Auditing and Cyber Security

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the graduate certificate in Information Technology Auditing and Cyber Security.

## About the Certificate

The graduate certificate program in Information Technology Auditing and Cyber Security (ITACS) immerses students in a series of IT risk management, cyber security and information technology auditing courses. The ITACS graduate certificate is an efficient, high-impact program that prepares the next generation of information assurance specialists for the rapidly changing landscape of information systems security.

Our graduate certificate program is designed for working professionals. Rigorous, hands-on courses are taught by faculty who work for leading businesses on the front lines of IT risk management, cyber security and information systems auditing. Students also have the option to transfer credits earned into the Information Technology Auditing and Cyber Security MS (p. 139) degree.

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Fox School's admissions advisor for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Fall:

- December 15 – Early Admissions Deadline
- June 30 – Final Deadline

Spring:

- August 1 – Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

**Bachelor's Degree:** A baccalaureate degree from an accredited university or college is required. Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English.

**Statement of Goals:** In 250 words or less, describe your goals and motivations for pursuing this certificate program.

**Resume:** Current resume or CV is required.

## Certificate Requirements

Number of Credits Required to Complete the Certificate: 12

Required Courses:

Code	Title	Credit Hours
Select four courses from the following:		12
MIS 5121	Enterprise Resource Planning Systems	
MIS 5122	Enterprise Architecture for IT Auditors	
MIS 5201	IT Audit Process	
MIS 5202	IT Governance	
MIS 5203	Systems and Infrastructure Lifecycle Management 1	
MIS 5205	IT Service Delivery and Support 1	
MIS 5206	Protection of Information Assets	
MIS 5208	Data Analytics for IT Auditors	
MIS 5211	Ethical Hacking 2	
MIS 5213	Intrusion Detection & Response 2	
MIS 5214	Security Architecture 3	
MIS 5215	Operating System Security 2	
MIS 5216	Organizational Forensics 2	
MIS 5217	Network Security 2	

**Total Credit Hours** 12

1

MIS 5205 may be taken only after successful completion of MIS 5201.

2

Cyber security courses (MIS 5211, MIS 5213, MIS 5215, MIS 5216 and MIS 5217) may be taken only with permission from the Academic Director.

3

MIS 5214 may be taken only after successful completion of MIS 5206.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/information-technology-auditing-and-cyber-security-certificate-graduate-bu-itac-grad>

### Department Information:

Dept. of Management Information Systems

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

ITACS Academic Director:

David Lanter, PhD, GISP, CISA, CISSP

david.lanter@temple.edu  
215-204-3077

*Course Registration:*

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
rcarr@temple.edu  
215-204-0574

## Graduate Certificate: Innovation Management and Entrepreneurship

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the graduate certificate in Innovation Management and Entrepreneurship.

### About the Certificate

The graduate certificate in Innovation Management and Entrepreneurship is designed such that students have an efficient path through the coursework. The required courses are important for both entrepreneurs and intrapreneurs, i.e., those working within an organization.

The key learning goals for the graduate certificate in Innovation Management and Entrepreneurship include:

- learn to leverage divergent and convergent thinking techniques to creatively solve problems,
- design and evaluate business models and business model innovations,
- understand how to make innovation central to strategy,
- learn to identify and test assumptions as well as unknowns, and
- identify entrepreneurial opportunity.

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Fox School's admissions advisor for more information.

### Admission Requirements and Deadlines

Students are accepted into the certificate program in both the Fall and Spring terms.

APPLY ONLINE to this Fox graduate program.

**Bachelor's Degree:** A baccalaureate degree from an accredited university or college is required. Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English.

**Statement of Goals:** In 250 words or less, describe your goals and motivations for pursuing this certificate program.

**Resume:** Current resume or CV is required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
SGM 5139	Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas	3
SGM 5142	Business Model Innovation	3
<b>Elective</b>		
Select one from the following:		3
SGM 5103	Management of Technology and Innovation	
SGM 5135	Innovation Intelligence: Plan, Build, Protect, and Monetize a Technology / Innovation Portfolio	
SGM 5137	Entrepreneurial Thinking and New Venture Creation	
SGM 5138	Global Innovation Strategy: Creating Agile, Innovative, Globally-Competitive Organizations	
SGM 5144	Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges	
SGM 5145	Plan, Pitch, and Fund an Entrepreneurial Start-Up	
SGM 5148	Open Innovation and Managing Strategic Alliances	
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/innovation-management-and-entrepreneurship-certificate-graduate-bu-ime-grad>

#### Department Information:

Innovation and Entrepreneurship Institute (IEI)  
mgmtdept@temple.edu

#### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

#### Department Contacts:

*Director, Temple University Entrepreneurship Academy:*  
Alan B. Kerzner  
alan.kerzner@temple.edu  
215-204-8188

*Course Registration:*

Rachel Carr  
Senior Associate Director for Specialized Master's Programs  
rcarr@temple.edu  
215-204-0574

## Graduate Certificate: Management Consulting

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### About the Certificate

This graduate certificate is not open for enrollment for the 2023-2024 academic year.

## Graduate Certificate: Organizational Leadership

FOX SCHOOL OF BUSINESS AND MANAGEMENT

Learn more about the graduate certificate in Organizational Leadership.

### About the Certificate

Organizations need strong leaders who:

- internalize how individuals, groups and organizations function;
- embrace diversity, equity, inclusion and justice as part of their practices; and
- enable teamwork, both as a colleague and team member and as a leader.

Our graduate certificate in Organizational Leadership is designed to equip rising professionals with the ability to influence success both for individuals and for the organization through practical leadership skills.

Courses include overviews of various leadership content areas, as well as a choice of elective in the additional areas of negotiation, communication and strategic leadership. All courses are delivered online and include virtual classroom meetings with a Fox School faculty member and student-classmates. Rigorous hands-on courses are taught by faculty who are leaders in their fields and businesspeople who have managerial and leadership experience. Participants also have the option to transfer credits earned into a Fox graduate degree program, such as the Human Resource Management MS.

The Organizational Leadership certificate program is appropriate for:

- individual contributors who seek a leadership role, and
- general managers who would like to develop their leadership skills.

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Fox School's admissions advisor for more information.

### Admission Requirements and Deadlines

#### Application Deadline:

Fall:

- December 15 – Early Admissions Deadline
- June 30 – Final Deadline

Spring:

- August 1 – Early Admissions Deadline
- November 1 – Final Deadline

Applications are reviewed as they are received and will be considered after the deadline.

APPLY ONLINE to this Fox graduate program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited university or college is required. Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree in a country where the language of instruction is English, must report scores for a standardized test of English.

**Statement of Goals:** In 250 words or less, describe your goals and motivations for pursuing this certificate program.

**Resume:** Current resume or CV is required.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
HRM 5001	Leading Organizations	3
HRM 5112	Leading High Performing Teams	3
HRM 5122	Leading with a Diversity, Equity, and Inclusion Perspective	3
<b>Elective</b>		
Select one of the following:		3
HRM 5111	Influential Organizational Communication	
HRM 5113	Power, Influence, and Negotiation	
HRM 5121	Leading Strategically: Trends, Analytics, and Impact	
SGM 5142	Business Model Innovation	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/organizational-leadership-certificate-graduate-bu-orld-grad>

#### Department Information:

Fox School of Business and Management  
1801 Liacouras Walk  
701 Alter Hall (006-22)  
Philadelphia, PA 19122  
foxinfo@temple.edu  
215-204-5890  
215-204-7678  
Fax: 215-204-1632

## **Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

## **Department Contacts:**

*Academic Director:*

Kelly Grace, JD, PhD

[kelly.grace@temple.edu](mailto:kelly.grace@temple.edu)

215-204-1621

*Course Registration:*

Rachel Carr

Senior Associate Director for Specialized Master's Programs

[foxms@temple.edu](mailto:foxms@temple.edu)

215-204-0574

## **Graduate Certificate: Real Estate**

FOX SCHOOL OF BUSINESS AND MANAGEMENT

### **About the Certificate**

This graduate certificate is not open for enrollment for the 2023-2024 academic year.



## Kornberg School of Dentistry

Temple University's Maurice H. Kornberg School of Dentistry is a center of excellence in dental education, patient care, and community-based service and research. The school's mission is to promote oral health through the education of diverse general and specialty dentists with advanced skills. Our dentists provide patient-centered and evidence-based comprehensive care while engaging in research, scholarly activities and community service. Founded in 1863 as the Philadelphia Dental College, it is the second oldest continuously operating dental school in the United States.

Kornberg School of Dentistry provides more than 300,000 patient procedures every year and is known around the nation and the world for the quality of its clinical education. The school's patient base and outreach in its immediate community offer students exceptional opportunities to develop clinical skills in the full range of oral health care. The school's preclinical lab, four general practice clinics, and eight specialty clinics create a state-of-the-art environment for clinical education and patient care on Temple's Health Sciences Center campus. Temple dental students work in a comprehensive-care, large-practice setting equipped with the latest technologies, including computer-aided design and computer-aided manufacturing (CAD/CAM) and cone-beam imaging.

A growing faculty research enterprise explores issues with broad-scale impact on dental and overall health. Dental faculty are conducting research into remineralization of dental enamel; regeneration of dental pulp tissue; development of bacterial viruses to combat infections caused by antibiotic-resistant bacterial strains; the effect of maternal behavior in influencing dental hygiene practices in young children; and other topics.

Temple's Kornberg School of Dentistry prepares students to serve their patients and to shape the continued development of the dental profession and oral health. Kornberg School graduates demonstrate the highest levels of skills, with outstanding manual dexterity, diagnostic and clinical skills, and a sound understanding of the science and business aspects of dental practice.

## Graduate and Professional Programs and Certificates

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- Dentistry Certificate: Dental Public Health (p. 170)
- Dentistry Certificate: Endodontics (p. 172)
- Dentistry Certificate: Oral and Maxillofacial Surgery (p. 174)
- Dentistry Certificate: Orthodontics (p. 176)
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- Dentistry Certificate: Prosthodontics (p. 181)

## Graduate Faculty

*Nezar Al-Hebshi*, Associate Professor, Department of Oral Health Sciences, Kornberg School of Dentistry; PhD, University of Bergen.

*Jsam M. Albandar*, Professor, Department of Periodontology and Oral Implantology, Kornberg School of Dentistry; DMD, Temple University Kornberg School of Dentistry.

*Kenneth G. Boberick*, Associate Professor, Department of Restorative Dentistry, Kornberg School of Dentistry; DMD.

*Eugene M. Dunne*, Assistant Professor, Department of Oral Health Sciences, Kornberg School of Dentistry; PhD, University of Florida-Gainesville.

*Amid Ismail*, Laura H. Carnell Professor and Dean, Department of Restorative Dentistry, Kornberg School of Dentistry; DrPH, University of Michigan.

*Laurie MacPhail*, Professor, Department of Oral and Maxillofacial Pathology, Medicine and Surgery, Kornberg School of Dentistry; DMD.

*Roni Nissan*, Associate Professor, Department of Endodontology, Kornberg School of Dentistry; DMD, Temple University Kornberg School of Dentistry.

*Santiago Orrego*, Assistant Professor, Department of Restorative Dentistry, Kornberg School of Dentistry; PhD, University of Maryland Baltimore County.

*Sumant Puri*, Assistant Professor, Department of Oral Health Sciences, Kornberg School of Dentistry; PhD, State University of New York at Buffalo.

*Thomas E. Rams*, Professor, Department of Periodontology and Oral Implantology, Kornberg School of Dentistry; DDS, University of Maryland.

*James J. Sciote*, Professor, Department of Orthodontics, Kornberg School of Dentistry; PhD, University of Michigan.

*Roy H. Stevens*, Professor, Department of Endodontology, Kornberg School of Dentistry; DDS, Columbia University.

*Marisol Tellez-Merchán*, Associate Professor, Department of Oral Health Sciences, Kornberg School of Dentistry; PhD, University of Michigan.

*Orhan C. Tuncay*, Gerald D. Timmons Professor, Department of Orthodontics, Kornberg School of Dentistry; DMD, Temple University Kornberg School of Dentistry.

*Jie Yang*, Professor, Department of Oral and Maxillofacial Pathology, Medicine and Surgery, Kornberg School of Dentistry; DMD, Temple University Kornberg School of Dentistry.

*Maobin Yang*, Associate Professor, Department of Endodontology, Kornberg School of Dentistry; DMD, Temple University Kornberg School of Dentistry, PhD, University of Connecticut.

*Cemil Yesilsoy*, Associate Professor, Department of Endodontology, Kornberg School of Dentistry; DMD, Temple University Kornberg School of Dentistry.

## Dentistry DMD

KORNBERG SCHOOL OF DENTISTRY

Learn more about the Doctor of Dental Medicine.

## About the Program

The Maurice H. Kornberg School of Dentistry at Temple University offers a four-year pre-doctoral program leading to the Doctor of Dental Medicine (DMD) degree.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is required.

**Job Prospects:** Graduates of the program are employed in a variety of diverse general dentistry settings.

**Licensure/Certification:** In order to become a practicing dentist, students must first obtain licensure. This process includes completing an educational program that is accredited by the Commission on Dental Accreditation (CODA). Students also need to complete Parts I and II of the National Board Dental Examination (NBDE) administered by the Joint Commission on National Dental Examinations. For most U.S. jurisdictions, the last component is that students complete a clinical licensure examination.

Each State Board of Dentistry sets its own requirements for the clinical examination, with regional testing agencies administering the examination process. At present, all but the following jurisdictions accept successful completion of the American Board of Dental Examiners (ADEX) dental examinations as administered by The Commission on Dental Competency Assessments (CDCA): Delaware and New York. Delaware has its own licensing exam, and New York requires students to complete a one-year clinical residency program.

Temple University Kornberg School of Dentistry is CODA-accredited and prepares students for the written and clinical examinations. Kornberg students must complete Parts I and II of the NBDE before graduation. Successful completion of a clinical examination is not required for graduation, although Kornberg does host the ADEX examination in its school facilities.

**Non-Matriculated Student Policy:** Coursework may not be taken on a non-matriculated basis.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 15

[APPLY ONLINE to this professional program.](#)

Applicants for the Dentistry DMD must utilize the Associated American Dental Schools Application Service (AADSAS®), which is a centralized application service for all U.S. dental schools sponsored by the American Dental Education Association (ADEA). The ADEA AADSAS® application must be completed.

Additional information regarding the application process is found at the DMD's Admissions page. In brief, applicants must have:

- Completed a minimum of 90 semester hours at an accredited college or university.
- Completed at least one year of college and all dental prerequisite courses in the United States or Canada if the student was educated at an institution outside the United States or Canada.

- Completed a minimum of eight semester hours in each of the following subjects, all with laboratory experience: biology, general chemistry, organic chemistry and physics. It is also highly recommended that the student gained exposure to advanced science courses, particularly anatomy, biochemistry, histology and physiology.
- Completed six semester hours in English.
- Met the technical standards established for behavioral, cognitive, communication, motor and sensory/observation skills.

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from science professors or pre-health committee members.

**Degree Required for Admission Consideration:** Applicants should have completed a minimum of 90 semester hours from an accredited college or university. Students who have completed a baccalaureate degree are given preference in the admissions process.

**Standardized Test Scores:**

DAT: Required. Applications will not be reviewed without reported DAT scores. DAT scores more than two years old at the time of application will not be accepted. Proficiency in English must be demonstrated as determined through the interview, essays and Reading Comprehension score on the DAT.

**Transcripts:** Complete official transcripts for all undergraduate coursework must be submitted.

**Interview:** Applicants are invited to visit the Kornberg School of Dentistry for a formal interview. The visit involves meeting with current students in the program, touring the facility, reviewing financial aid and housing procedures, and engaging in an interview. The applicant is given an opportunity to learn more about Temple and to review the submitted application. The interview affords the Admissions Committee an opportunity to learn more about the applicant and to gauge motivation, approach to problems and communication skills.

**Acceptance:** Decisions are made starting December 1. Admission is rolling after that date. Upon acceptance, a non-refundable deposit is required to hold a seat in the class.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required:* 219

*Required Courses:*

Year 1		Credit Hours
Fall		
DENT D100	Biochemistry	4
DENT D101	General and Oral Histology	6
DENT D120	The Practice and Profession of Dentistry	2
DENT D150	Dental Materials I	1
DENT D162	Restorative Dentistry I - Lecture	2
DENT D163	Restorative Dentistry I - Lab	2
<b>Credit Hours</b>		<b>17</b>

<b>Spring</b>		
DENT D139	DPH I: Cariology, EBD and Principles of Prevention	1
DENT D202	Gross Anatomy	6
DENT D203	Neuroanatomy	2
DENT D262	Restorative Dentistry II Lecture	4
DENT D263	Restorative Dentistry II Lab	4
<b>Credit Hours</b>		<b>17</b>

<b>Summer</b>		
DENT D108	Science in Dental Practice I	1
DENT D200	Inflammation, Infection and Wound Healing	3
DENT D204	The Nervous System and Pain	3
DENT D210	Postnatal Craniofacial Growth and Cephalometrics	2
DENT D211	Behavioral Science I	1
<b>Credit Hours</b>		<b>10</b>

<b>Year 2</b>		
<b>Fall</b>		
DENT D300	Human Systems and Disease I	5
DENT D301	Human Systems and Disease II	5
DENT D339	Oral Surgery I	1
DENT D360	Restorative Dentistry III Lecture	4
DENT D361	Restorative Dentistry III Lab	4
DENT D373	Principles of Periodontology I	2
<b>Credit Hours</b>		<b>21</b>

<b>Spring</b>		
DENT D402	DPH II - Health Promotion in Populations	1
DENT D408	Oral Pathology I	3
DENT D420	Intro Clinical Dentistry	2
DENT D442	Pre-Clinical Radiography	2
DENT D456	Restorative Dentistry IV Lecture	3
DENT D457	Restorative Dentistry IV Lab	3
DENT D465	Oral Radiology	1
DENT D466	Pediatric Dentistry Lecture and Laboratory	3
DENT D473	Principles of Periodontology II	2
DENT D478	Local Anesthesia and Pain Control	1
<b>Credit Hours</b>		<b>21</b>

<b>Summer</b>		
DENT D401	Dental Ethics and Jurisprudence	1
DENT D403	Advanced Restorative Dentistry Lecture and Lab	3
DENT D421	Treatment Planning	1
DENT D422	Medical Emergencies	1
DENT D452	Endodontology Lecture	2
DENT D453	Endodontology Laboratory	1
DENT D589	Jr. Summer Clinic I	9
DENT D599	Jr. Summer Clinic II	6
<b>Credit Hours</b>		<b>24</b>

<b>Year 3</b>		
<b>Fall</b>		
DENT D506	Oral Pathology II	3
DENT D510	Basic Interdisciplinary Implant	2
DENT D552	Endodontology	1
DENT D553	Restorative Dentistry V	2

DENT D567	Oral Radiology	1
DENT D568	Oral Surgery	1
DENT D573	Periodontal Therapy and Treatment Planning	1
DENT D591	Jr. Practice of Dentistry	7
<b>Credit Hours</b>		<b>18</b>

<b>Spring</b>		
DENT D505	Temporomandibular Disorders (TMD) and Oral Medicine	1
DENT D608	Radiology	1
DENT D610	Adv Interdis Implant	1
DENT D637	Practice Management I	1
DENT D662	Restorative Dentistry VI	1
DENT D666	Pediatric Dentistry	1
DENT D668	Oral Surgery	1
DENT D671	Ortho Consideration in General Dental Practice	1
DENT D674	Admissions Clinic I	1
DENT D675	Emergency/Oral Surg. Cl.	2
DENT D676	Radiology Clinic I	1
DENT D691	Orthodontics-Clinic	1
DENT D692	Endodontology-Clinic	2
DENT D693	Periodontology Clinic	2
DENT D696	Pediatric Dent-Clinic	2
DENT D697	Restor Dent Clinic Jr	6
<b>Credit Hours</b>		<b>25</b>

<b>Summer</b>		
DENT D600	Senior Summer Clinic	12
DENT D611	Practice Management II	1
DENT D644	Dentistry for Patients with Special Needs	1
DENT D660	Behavioral Science II	1
DENT D700	Summer Clinic II	6
<b>Credit Hours</b>		<b>21</b>

<b>Year 4</b>		
<b>Fall</b>		
DENT D790	Sr. Pract of Dentistry	12
<b>Credit Hours</b>		<b>12</b>

<b>Spring</b>		
DENT D801	Science in Dental Practice II	2
DENT D808	Comprehensive Care	1
DENT D809	Practice Management III	1
DENT D810	DPH III: Community Health Engagement	2
DENT D874	Admissions Clinic II	1
DENT D875	Emergency/Oral Surg. Cl.	3
DENT D876	Radiology Clinic II	2
DENT D892	Endodontology-Clinic	3
DENT D893	Periodontology-Clinic	3
DENT D896	Pediatric Dent-Clinic	3
DENT D897	Restor Dent Clinic Sr	12
<b>Credit Hours</b>		<b>33</b>

**Total Credit Hours 219**

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/dentistry-dmd-dn-dent-dmd>

### Submission Address for AADSAS

#### Application Materials:

<https://aadsas.liaisoncas.com/applicant-ux/>

### Associated American Dental Schools Application Service (AADSAS) Contacts:

aadsasinfo@aadsasweb.org  
617-612-2045

### Department Contacts:

#### Admissions:

Kornberg School of Dentistry Office of Admissions  
3223 N. Broad Street (600-00), Philadelphia, PA 19140  
kornbergadmissions@temple.edu  
800-441-4363

## Dentistry/Advanced Standing Program for Internationally Trained Dentists DMD

KORNBERG SCHOOL OF DENTISTRY

Learn more about the Doctor of Dental Medicine Advanced Standing Program for Internationally Trained Dentists.

### About the Program

The Kornberg School of Dentistry offers a postgraduate opportunity for dentists who hold a DDS, DMD or BDS degree from an international dental school not accredited by the Commission on Dental Accreditation (CODA). This comprehensive program includes both clinical and didactic training.

Residents in this one-year program have the flexibility to pursue an optional second year of Advanced Education in General Dentistry (AEGD) training and/or to earn an optional Oral Health Sciences MS (p. 164) degree. Those interested in the optional MS degree must apply to both the first-year AEGD and MS programs concurrently. If accepted to both programs, the tuition for the MS degree program is included in the AEGD tuition. Learn more about how to apply to the AEGD program for international applicants.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is required.

**Job Prospects:** Graduates of the program are employed in a variety of diverse general dentistry settings.

**Non-Matriculated Student Policy:** Coursework may not be taken on a non-matriculated basis.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer:* July 15 to start in June of the following year

APPLY ONLINE to this professional program.

Applicants for the Dentistry DMD must utilize the Centralized Application for Advanced Placement for International Dentists (CAAPID), which is a centralized application service sponsored by the American Dental Education Association (ADEA) for internationally educated dental graduates who wish to practice dentistry in the United States or Canada. The ADEA CAAPID® application must be completed.

Additional information regarding the application process is found on the DMD Program page.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation must have been written within one year of the date of application. One letter must be written by the dean of the dental college attended, and one letter must be provided by a science professor or dental professional. These letters must be submitted to ADEA CAAPID.

**Degree Required for Admission Consideration:** Applicants must have earned a dental degree from a dental school outside of the United States and Canada.

### Standardized Test Scores:

**NBDE/INBDE:** Required. All applicants must have passed the National Board Dental Examination (NBDE) Part I and Part II or Integrated National Board Dental Examination (INBDE) to be considered for admission into the Advanced Standing Program or Attrition Based DMD Program. An official or notarized copy of NBDE or INBDE scores will be requested by the Kornberg School of Dentistry if the applicant is invited for an interview.

**TOEFL iBT:** 100 minimum required. All applicants must be proficient in the English language to be admitted to the Advanced Standing Program and to its companion program, the Attrition Based DMD Program for those waitlisted for the Advanced Standing Program. An official or notarized copy of TOEFL scores will be requested by the Kornberg School of Dentistry if the applicant is invited to interview. TOEFL scores must be no more than two years old.

**Transcripts and Credential Evaluation:** A detailed credential evaluation report prepared by Educational Credential Evaluators, Inc. (ECE) must be submitted. Application eligibility requires a degree from an international dental school degree showing completion of a minimum of 120 credits with a minimum GPA of 3.0. Kornberg School of Dentistry only accepts ECE evaluations, which include a dental school course-by-course analysis, sent to ADEA CAAPID. For more information, contact <https://www.ece.org/>.

**Interview with Skills Assessment:** Following initial review and evaluation of the applicant's credentials and other documents, select applicants are invited to visit the Kornberg School of Dentistry for a formal interview. The visit includes a skills assessment, which is performed by faculty who evaluate the applicant's pre-clinical and clinical skills. A fee applies.

**Acceptance:** Advanced Standing applicants who are offered admission to the Kornberg School of Dentistry enter into the second or third year of dental school. Internationally trained dental students are held to the same standards as domestic students who enroll in the DMD program.

## Program Requirements

### General Program Requirements:

Number of Credits Required: 125

### Required Courses:

Code	Title	Credit Hours
DENT D251	Dental Materials I & II	2
DENT D420	Intro Clinical Dentistry	2
DENT D505	Temporomandibular Disorders (TMD) and Oral Medicine	1
DENT D506	Oral Pathology II	3
DENT D510	Basic Interdisciplinary Implant	2
DENT D552	Endodontology	1
DENT D553	Restorative Dentistry V	2
DENT D567	Oral Radiology	1
DENT D568	Oral Surgery	1
DENT D573	Periodontal Therapy and Treatment Planning	1
DENT D591	Jr. Practice of Dentistry	7
DENT D600	Senior Summer Clinic	12
DENT D608	Radiology	1
DENT D610	Adv Interdis Implant	1
DENT D611	Practice Management II	1
DENT D637	Practice Management I	1
DENT D644	Dentistry for Patients with Special Needs	1
DENT D660	Behavioral Science II	1
DENT D662	Restorative Dentistry VI	1
DENT D666	Pediatric Dentistry	1
DENT D668	Oral Surgery	1
DENT D671	Ortho Consideration in General Dental Practice	1
DENT D674	Admissions Clinic I	1
DENT D675	Emergency/Oral Surg. Cl.	2
DENT D676	Radiology Clinic I	1
DENT D691	Orthodontics-Clinic	1
DENT D692	Endodontology-Clinic	2
DENT D693	Periodontology Clinic	2
DENT D696	Pediatric Dent-Clinic	2
DENT D697	Restor Dent Clinic Jr	6
DENT D700	Summer Clinic II	6
DENT D790	Sr. Pract of Dentistry	12
DENT D801	Science in Dental Practice II	2
DENT D808	Comprehensive Care	1
DENT D809	Practice Management III	1
DENT D810	DPH III: Community Health Engagement	2
DENT D874	Admissions Clinic II	1
DENT D875	Emergency/Oral Surg. Cl.	3
DENT D876	Radiology Clinic II	2
DENT D892	Endodontology-Clinic	3

DENT D893	Periodontology-Clinic	3
DENT D896	Pediatric Dent-Clinic	3
DENT D983	Dental Public Health Science	2
DENT D985	Oral Maxillofacial Pathology Medicine Surgery	2
DENT D986	Pre-Clinic Orthodontics	1
DENT D897	Restor Dent Clinic Sr	12
DENT D988	Pediatric Dentistry	3
DENT D993	Operative Dentistry Clinic	1
DENT D994	Fixed Prosthodontics I	1
DENT D996	Removable Prosthodontics I	1
DENT D998	Endodontics I	1

**Total Credit Hours** **125**

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/international-dentists-dmd-dn-dnft-dmd>

### Submission Address for Application Materials:

<https://www.adea.org/CAAPIDapp/>

## Centralized Application for Advanced Placement for International Dentists (CAAPID) Contacts:

caapidinfo@caapid.org  
617-612-2035

### Department Contacts:

#### Admissions:

Kornberg School of Dentistry Office of Admissions  
3223 N. Broad Street (600-00), Philadelphia, PA 19140  
kornbergadmissions@temple.edu  
800-441-4363

## Oral Health Sciences MS

### KORNBERG SCHOOL OF DENTISTRY

Learn more about the Master of Science in Oral Health Sciences.

### About the Program

The MS in Oral Health Sciences program is designed to meet the needs of those who wish to pursue an advanced science degree. This flexible program allows students to choose either to survey a range of oral health disciplines or to pursue an interest in one particular discipline. Students may select a Clinical Specialty Track, a Clinical Internship Track, or a Non-Clinical Internship Track. Each track requires completion of 30 credits of coursework, with an emphasis on producing a scholarly work that demonstrates mastery of the scientific method and creation of new knowledge.

The MS in Oral Health Sciences provides advanced education on the structure, development and function of oral tissues, their interrelationships, and their relation to other organ systems in both health and disease. Emphasis is on gaining advanced understanding of oral and

craniofacial structures and their function in health and disease, as well as application of modern biological principles and research techniques in the diagnosis, treatment and prevention of oral and craniofacial diseases and anomalies.

Areas of study for the Oral Health Sciences MS program include traditional basic biomedical science disciplines, such as advanced biomaterials, advanced digital dentistry, advanced systematic review and critical thinking, anatomy, clinical pharmacology, contemporary laboratory techniques, neurophysiology of pain, oral microbiomes, and regenerative medicine, with emphasis on how these areas relate to oral health and disease. Study and research opportunities are offered in a variety of areas, including, but not limited to, advanced general dentistry, dental biomaterials, oral implantology, oral and maxillofacial radiology, oral microbiology and immunology, oral molecular biology, oral mucosal disorders, periodontal and craniofacial regeneration, pulp biology, and such clinical fields as endodontology, implantology, orthodontics, periodontology and public health. The goals of the Oral Health Sciences MS program are to:

- advance knowledge and understanding in the scientific field of oral health sciences;
- develop "clinical scholars" in dentistry by offering an adaptive graduate-level education across a variety of dental disciplines applicable to oral health;
- offer oral healthcare professionals the opportunity to attain a deeper, more focused understanding of their respective disciplines; and
- provide graduate-level training and experience in research methodology and technology to better qualify students for careers in academic and/or industry-related oral health activities.

**Time Limit for Degree Completion:** 4 years, but can be completed in 2 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Students not enrolled in an advanced training certificate program may choose to complete the MS degree either on a full- or part-time basis. Students enrolled in a Commission on Dental Accreditation (CODA)-accredited advanced training certificate program are full-time.

**Interdisciplinary Study:** The curriculum of the Oral Health Sciences MS program is inherently interdisciplinary and crosses traditional department boundaries of basic biomedical sciences, such as anatomy, microbiology, pharmacology and physiology. A major strength of the program lies in offering Clinical Internship and Non-Clinical Internship tracks such that students who are not enrolled in a specialty certificate program are able to choose from course offerings across all dental specialty programs and disciplines at Temple University's Kornberg School of Dentistry.

**Areas of Specialization:** Three tracks are offered:

- Clinical Specialty, which is intended for post-graduate students enrolled in a CODA-accredited advanced training certificate program at the Kornberg School of Dentistry. Coursework in the students' respective post-graduate certificate program is used toward fulfilling the required 30 credits for the MS degree.
- Clinical Internship, which is intended to be a stand-alone program for students who are not enrolled in an advanced training certificate program at the Kornberg School of Dentistry, but wish to broaden their understanding of clinical dentistry.

- Non-Clinical Internship, which is intended to be a stand-alone program for students with or without a dental degree who have an interest in advanced master's-level education in oral health sciences. The curriculum for students in the Non-Clinical Internship Track does not include clinical courses.

**Job Prospects:** Graduates of the MS in Oral Health Sciences degree program may be engaged in academic teaching and research careers, private clinical patient care, and industry-related oral health activities.

**Non-Matriculated Student Policy:** Coursework may not be taken on a non-matriculated basis.

**Financing Opportunities:** Contact the Office of Graduate Education in the Kornberg School of Dentistry for information.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

Applicants either accepted into or applying for one of the advanced training certificate programs at the Kornberg School of Dentistry may submit application documents in conjunction with the PASS application for their certificate program. Information regarding advanced training certificate programs at the Kornberg School of Dentistry can be obtained at <https://dentistry.temple.edu/>.

Applicants not affiliated with one of the Kornberg School of Dentistry's advanced training certificate programs apply through the Allied Health Centralized Application Service (AHCAS) and complete the supplemental application to Temple University.

Applications are processed as they are received. Late applications may be considered for admission.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from faculty members who are familiar with the applicant's academic background and potential for graduate-level study. Referees may know the applicant from dental school or wherever their highest degree was attained.

**Degree Required for Admission Consideration:** Applicants to the Oral Health Sciences graduate program must hold a BDS, DDS, DMD or other bachelor's degree from an accredited college or university. The minimum preferred undergraduate GPA is 3.0. No prerequisites must be met to apply to the Oral Health Sciences MS program, but applicants with a GPA of 3.25 or higher in mathematics/statistics courses and strong grades in writing are preferred.

All applicants must present official credentials that are the equivalent of an accredited baccalaureate degree. Official transcripts should be sent directly to AHCAS electronically or mailed to AHCAS Transcript Processing Center, PO Box 9127, Watertown, MA 02471.

A WES evaluation or ECE evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> or <https://www.ece.org/> and submitted through AHCAS.

Alternately, applicants who have successfully completed Kornberg School of Dentistry's Post-Baccalaureate Program (PBP) with a cumulative GPA of 3.0 or higher may apply to the Oral Health Sciences MS and request

that up to 15 credits of pre-approved PBP coursework completed with a grade of "B" or better count toward completion of elective credits for the MS. Credits from Kornberg's PBP must have been completed no more than 12 months before matriculating into the MS in Oral Health Sciences. Applicants who qualify may be able to complete the MS program within 12 months, although certain restrictions may apply. Consult with the Director of Graduate Programs at dentalgrad@temple.edu regarding specific courses and requirements and to determine if you qualify.

Applicants who have completed Kornberg's PBP within the last 12 months submit a supplemental application and either an AHCAS application or their original PBP application through PostbacCAS or ADEA AADSAS®. Applicants who opt to use their original application source may require additional material to be sent directly to Kornberg School of Dentistry. Contact the Director of Graduate Programs for more information at dentalgrad@temple.edu.

**Statement of Goals:** In approximately 500 to 1,000 words, address your academic and research achievements to date, overall career goals, specific interest in Temple University's Oral Health Sciences graduate program, and proposed research interests.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate, BDS, DDS or DMD: 40*

*Number of Credits Required Beyond Successful Completion of Kornberg School of Dentistry's Post-Baccalaureate Program (PBP): 25, with MS coursework beginning within 12 months of completing the Kornberg PBP*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology <sup>1</sup>	1
	or OHSC 8056 Oral and Maxillofacial Pathology for Non-Clinicians	
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology <sup>2</sup>	1
	or OHSC 8059 Oral Radiology for Non-Clinicians	
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1

**Electives <sup>3</sup> 24**

**Research Courses**

OHSC 9991	Research in Oral Health Sciences	4
OHSC 9993	Master's Research Qualifying Examination	1
OHSC 9996	Master's Thesis in Oral Health Sciences	1

**Total Credit Hours 40**

1

Students in the Clinical Specialty and Clinical Internship Tracks register for OHSC 8016. Students in the Non-Clinical Internship Track register for OHSC 8056.

2

Students in the Clinical Specialty and Clinical Internship Tracks register for OHSC 8019. Students in the Non-Clinical Internship Track register for OHSC 8059.

3

Students in the Clinical Specialty Track earn the additional 24 credits from coursework completed in their respective specialized area of study while enrolled in a CODA-accredited advanced training certificate program. Students in the Clinical Internship Track and the Non-Clinical Internship Track select their additional 24 credits from the electives identified below. Alternately, with the approval of the program course director, elective courses in closely related graduate programs may be selected as electives by students in the Clinical Internship and Non-Clinical Internship Tracks.

## Approved Electives for the Clinical Internship Track Grouped by Subject Area

Code	Title	Credit Hours
<b>Dental Public Health Sciences</b>		
DPHS 8001	Foundations of Dental Public Health	3
DPHS 8002	Administration in Dental Public Health	2
DPHS 8003	Epidemiology and Prevention of Oral Diseases	3
DPHS 8004	The Role of Behavioral Science in Dental Public Health	1
DPHS 8005	Provision and Financing of Dental Public Health	2
<b>Endodontology</b>		
ENDG 8112	Pulp Biology	2
ENDG 8113	Periapical Biology	2
ENDG 8123	Endodontic Methods and Materials I	2
ENDG 8124	Endodontic Methods and Materials II	2
ENDG 8131	Endodontic Topics I	2
<b>Oral Biology</b>		
ORBG 8021	Microbiome	3
ORBG 8022	Microbiome Techniques	2
ORBG 8023	Craniofacial Bone Biology and Maxillofacial/Dental Orthopedic Care	2
ORBG 8024	Regeneration of Bone and Dental Hard Tissues	1
ORBG 8028	Basic and Advanced Statistical Methods	3
ORBG 8029	Behavioral Change Theories and Practice	2
ORBG 8031	Biomaterials	2
ORBG 8035	Introduction to Orthodontics	2
ORBG 8036	Molecular Technology for Translation to the Dental Clinic	2

ORBG 8037	Science of Taste Sensation and Relation with Oral Conditions	1
ORBG 8038	Inflammation and Oral Disease	2
<b>Oral Health Sciences</b>		
OHSC 8041	Evidence-Based Health Care	2
OHSC 8111	Endodontology Clinical Rotation	2
OHSC 8112	General Dentistry Clinical Rotation	2
OHSC 8113	Oral Surgery Clinical Rotation	2
OHSC 8114	Orthodontics Clinical Rotation	2
OHSC 8115	Pediatric Dentistry Clinical Rotation	2
OHSC 8116	Periodontology Clinical Rotation	2
OHSC 8150	Fundamentals of General Dentistry	1
OHSC 8151	Advanced General Dentistry	2
OHSC 8152	General Dentistry Literature Review	1
OHSC 8153	General Dentistry Implant Literature Review	1
OHSC 8250	Periodontology and Prosthodontic Treatment Planning	.5
OHSC 8350	Interdisciplinary Treatment Planning	1
<b>Orthodontics</b>		
ORTG 8404	Orthodontic Biomechanics	2
ORTG 8407	History of Orthodontics	1
ORTG 8408	Craniofacial Cephalometrics	3
ORTG 8414	Growth and Development of the Craniofacial Complex	2
ORTG 8416	Clinical Biomechanics	1
ORTG 8419	Orthodontic Principles and Techniques	1-4
ORTG 8424	Biology of Tooth Movement	2
<b>Periodontology</b>		
PERG 8301	Introduction to Postgraduate Periodontology	2
PERG 8306	Introduction to Oral Implantology	1
PERG 8310	Classic Periodontal Literature Review	2
PERG 8313	Conscious Sedation	2
PERG 8320	Current Periodontal Literature Review	1
PERG 8340	Oral Implantology Literature Review	2
<b>College of Public Health Coursework</b>		
EPBI 5002	Biostatistics	3
EPBI 5101	Fundamentals of Epidemiology	3
EPBI 5201	Epidemiological Research Methods I	3
EPBI 8201	Structural Equation Modeling	3
EPBI 8204	Multilev Mod in Int Res	3
HIM 5101	Fundamentals of Health Informatics	3
HRPR 8001	Introduction to Health Outcomes Measurement Science	3

## Approved Electives for the Non-Clinical Internship Track Grouped by Subject Area

Code	Title	Credit Hours
<b>Dental Public Health Sciences</b>		
DPHS 8001	Foundations of Dental Public Health	3
DPHS 8002	Administration in Dental Public Health	2
DPHS 8003	Epidemiology and Prevention of Oral Diseases	3

DPHS 8004	The Role of Behavioral Science in Dental Public Health	1
DPHS 8005	Provision and Financing of Dental Public Health	2
<b>Endodontology</b>		
ENDG 8131	Endodontic Topics I	2
<b>Oral Biology</b>		
ORBG 5005	Dental Anatomy	1
ORBG 8021	Microbiome	3
ORBG 8022	Microbiome Techniques	2
ORBG 8023	Craniofacial Bone Biology and Maxillofacial/Dental Orthopedic Care	2
ORBG 8024	Regeneration of Bone and Dental Hard Tissues	1
ORBG 8028	Basic and Advanced Statistical Methods	3
ORBG 8029	Behavioral Change Theories and Practice	2
ORBG 8031	Biomaterials	2
ORBG 8035	Introduction to Orthodontics	2
ORBG 8036	Molecular Technology for Translation to the Dental Clinic	2
ORBG 8037	Science of Taste Sensation and Relation with Oral Conditions	1
ORBG 8038	Inflammation and Oral Disease	2
<b>Oral Health Sciences</b>		
OHSC 8041	Evidence-Based Health Care	2
<b>Orthodontics</b>		
ORTG 8407	History of Orthodontics	1
ORTG 8414	Growth and Development of the Craniofacial Complex	2
<b>Periodontology</b>		
PERG 8340	Oral Implantology Literature Review	2
<b>College of Public Health Coursework</b>		
EPBI 5002	Biostatistics	3
EPBI 5101	Fundamentals of Epidemiology	3
EPBI 5201	Epidemiological Research Methods I	3
EPBI 8201	Structural Equation Modeling	3
EPBI 8204	Multilev Mod in Int Res	3
HIM 5101	Fundamentals of Health Informatics	3
HRPR 8001	Introduction to Health Outcomes Measurement Science	3

### Culminating Events:

#### *Qualifying Exam Presentation:*

Prior to commencing the master's project, the student's Master's Advisory Committee (MAC) must formally accept the project plan. All students must establish a MAC for their scholarly activity, which reviews and approves the student's proposed master's protocol and monitors the student's progress. The committee should consist of a primary faculty research mentor who serves as committee chair, another faculty member who has expertise in the area of research, and a third faculty member from another department who may have expertise in the area to be studied.

The primary research mentor must be a member of the Temple University graduate faculty and approved by the Chair of the student's home academic department at the Kornberg School of Dentistry or the Assistant Dean for Advanced Clinical Education. The MAC must include members of at least two different departments at the Kornberg School of



Dentistry, one of which must be the academic department representing the student's area of research. MAC members may include experts from outside of Temple University. In addition, the Assistant Dean for Advanced Clinical Education may serve as an ex-officio member of the committee. The majority of members of the MAC must be members of the graduate faculty. The committee has responsibility for submitting grades for OHSC 9991 Research in Oral Health Sciences, OHSC 9993 Master's Research Qualifying Examination, and OHSC 9996 Master's Thesis in Oral Health Sciences.

The comprehensive project plan is reviewed by members of the student's MAC and is then presented by the student in a qualifying exam presentation to demonstrate appropriate understanding of the project. This proposal contains an introduction, theories, hypotheses, scholarly literature review, research methods, proposed alternatives and any other issues relevant to the project.

*Master's Research Project:*

All students, regardless of their chosen track, complete a scholarly work acceptable to their MAC. The thesis may be an original research investigation, a self-directed capstone project, or a systematic review:

1. The original research investigation demonstrates the student's ability to design and carry out original research, and to analyze, interpret and present the resulting data under the supervision of an approved research mentor. The thesis must address a well-focused, scientifically meaningful question and a hypothesis that is of adequate scope and significance to qualify for an MS degree.
2. The self-directed capstone project results from the student's applying what has been learned throughout the course of graduate study in the examination of a specific idea. Successful projects are those that have added to the technological and practical advancements involved in the oral health sciences field. Capstone projects identify, define and research a pertinent problem or opportunity in a real-world setting and develop the means to address it. The findings and end product should be something that can be readily implemented and used.
3. A systematic review summarizes the results of available, carefully designed healthcare studies (controlled trials) and provides a high level of evidence on the effectiveness of healthcare interventions. Judgments may be made about the evidence and inform recommendations for healthcare. These reviews are complicated and depend largely on the available clinical trials, the quality of the trials conducted, and the health outcomes that were measured. Review authors pool numerical data about the effects of the treatment through the process of meta-analyses. Authors then assess the evidence for any benefits or harms from those treatments. In this way, systematic reviews are able to summarize the existing clinical research on a topic.

Each project is unique to the student's program and, therefore, the student must continuously consult with their MAC to ensure that their project is proceeding in a timely manner and is consistent with the qualifying exam presentation. When appropriate, a written manuscript must be submitted and orally defended to the student's MAC. The master's candidate is then invited by their MAC to give a formal presentation of their project that shall be announced and open to the faculty of the Kornberg School of Dentistry. The date and location are arranged by mutual agreement between the candidate and the MAC. The presentation must meet standards outlined by the MAC regarding foundation, organization, relevance and practicality of results.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/oral-health-sciences-ms-dn-ohsc-ms>

### Department Information:

Oral Health Sciences Graduate Program  
Kornberg School of Dentistry Office of Graduate Education  
3223 N. Broad Street  
Philadelphia, PA 19140  
[chukwuebuka.ogwo@temple.edu](mailto:chukwuebuka.ogwo@temple.edu)  
215-707-7062

### Submission Address for AHCAS Application Materials:

<https://ahcas.liasoncas.com/applicant-ux/>

### Mailing Address for Baccalaureate Transcripts:

AHCAS Transcript Processing Center  
PO Box 9127  
Watertown, MA 02471

### Submission Address for Temple University Application Materials:

<https://apply.temple.edu/DENTAL/>

### Department Contacts:

*Admissions:*  
Chukwuebuka Ogwo, PhD  
Program Director, Oral Health Sciences MS  
[chukwuebuka.ogwo@temple.edu](mailto:chukwuebuka.ogwo@temple.edu)  
215-707-7062

## Dentistry Certificate: Advanced Education in General Dentistry

KORNBERG SCHOOL OF DENTISTRY

Learn more about the certificate in Advanced Education in General Dentistry.

### About the Certificate

The 12-month certificate program in Advanced Education in General Dentistry (AEGD) from Temple University's Kornberg School of Dentistry expands students' knowledge and refines clinical competency and judgment. The program is designed to accommodate recent dental school graduates, who function in the program as residents, as well as applicants who hold a DMD or DDS degree from a Commission on Dental Accreditation (CODA)-accredited dental school. Dentists who hold a DDS, DMD or BDS degree from an international dental school not accredited by CODA may apply to the Advanced Standing Program for Internationally Trained Dentists (p. 163).

The field of dentistry is rapidly evolving as new restorative technologies are pioneered to serve patients who live longer and have more complex medication and healthcare needs. The AEGD program takes students

beyond the four-year DMD curriculum and strengthens their knowledge base and clinical judgment, helping them to keep pace with advances in the field. While primary patient care provides the majority of residents' learning experience, diagnostic skills and the ability to develop patient-appropriate treatment plans are also enhanced through the didactic curriculum and weekly seminars covering treatment planning, literature reviews and topics in general dentistry. Residents train to operate effectively and collaborate efficiently within cross-functional healthcare teams while honing their ability to provide emergency, multidisciplinary and patient-centered oral healthcare to a diverse community of patients with a broad spectrum of conditions and needs.

Certificate students acquire robust clinical experience by working in the AEGD Clinic, which operates as a stand-alone clinic with a staff of dental assistants and hygienists. Rotations in postgraduate endodontology, implantology and periodontology supplement the comprehensive patient care assignment in the AEGD clinical facility. Dedicated faculty, who are experts in their fields and who are full-time tenured members of the Department of Restorative Dentistry, instruct and support residents throughout their clinical development and treatment of complex cases.

**Time Limit for Certificate Completion:** 1 year

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is required.

**Job Prospects:** Dentistry has evolved tremendously over the years, and more can be learned beyond the dental degree. Graduates of the AEGD program go into the field having gained a better understanding of economic impacts; evolution of technologies; new restorative techniques and materials; patient management; and pharmacology, including side effects and interactions.

**Non-Matriculated Student Policy:** Participation in the certificate program is limited to dental school graduates accepted into the program on a yearlong basis.

**Financing Opportunities:** AEGD residents who hold a DMD or DDS degree from a CODA-accredited dental school receive a stipend of \$38,500. International dentists without a CODA-accredited dental degree should refer to the Temple University Tuition and Fees schedule.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer:* October 1

[APPLY ONLINE to this professional certificate program.](#)

Also APPLY ONLINE directly to Kornberg School of Dentistry.

Applicants for the Advanced Education in General Dentistry certificate program must utilize the Postdoctoral Application Support Service (PASS), which is a centralized application service sponsored by the American Dental Education Association (ADEA) for individuals applying to advanced dental education programs. The ADEA PASS® application must be completed.

All AEGD applicants must submit their application materials to PASS by September 15 to allow PASS sufficient time to process their materials and submit them to Temple by our October 1 deadline. Please check with PASS to ensure that your information has been received as they will only forward completed records to Temple University for assessment.

Additional information regarding the application process is found on the AEGD certificate's Admissions page.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from dental school faculty. At least two of the letters must be written by faculty who can evaluate the applicant's clinical skills.

**Degree Required for Admission Consideration:** Applicants must hold the DDS, DMD or BDS degree from a U.S. or Canadian dental school accredited according to the standards of the American Dental Association's Commission on Dental Accreditation (CODA).

### Standardized Test Scores:

**NBDE:** Required. All applicants must have passed the National Board Dental Examination (NBDE) Part I and Part II. If the applicant is currently a senior dental student, results from Part II may be forwarded directly to Kornberg School of Dentistry once received.

**TOEFL iBT:** 100 minimum

**Transcripts and Credential Evaluation:** Official transcripts from all colleges, universities and dental schools attended must be submitted. Transcripts should include GPA and class rank. Submit transcripts through the ADEA PASS® application.

Note that PASS does not accept undergraduate college transcripts. Applicants must send official transcripts for their undergraduate study directly to Kornberg School of Dentistry at the following address:

Advanced Education in General Dentistry (AEGD) Certificate Program  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street (600-00)  
Philadelphia, PA 19140

**Resume:** Current resume required. Submit resume through the ADEA PASS® application.

**Supplemental Document:** A 2x2 photo of the applicant's face is required for the AEGD program and should be included with the ADEA PASS® application.

**Acceptance:** Applicants will be notified of their admission consideration upon completion of all interview days. The AEGD program does not participate in the National Matching Service.

## Certificate Requirements

*Number of Credits Required:* 28

*Required Courses:*

Code	Title	Credit Hours
RDNT 9185	Advanced General Dentistry Clinic I	12
RDNT 9285	Advanced General Dentistry Clinic II	12
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds (2 terms)	4
<b>Total Credit Hours</b>		<b>28</b>

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/advanced-education-general-dentistry-certificate-graduate-dn-aegd-dent>

### Department Information:

Advanced Education in General Dentistry (AEGD) Certificate Program  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street  
Philadelphia, PA 19140  
louis.dipede@temple.edu  
215-707-9664

### Submission Address for PASS Application Materials:

[https://www.adea.org/dental\\_education\\_pathways/PASS/applicants/Pages/default.aspx](https://www.adea.org/dental_education_pathways/PASS/applicants/Pages/default.aspx)

### Postdoctoral Application Support Service (PASS) Contacts:

passinfo@passweb.org  
617-612-2065

### Submission Address for Temple University Application Materials:

[https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/)

### Mailing Address for Undergraduate Transcripts and Supplemental Document:

Dr. Marc Herman, AEGD Program Director  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street (600-00)  
Philadelphia, PA 19140  
marc.herman@temple.edu  
215-707-5934

### Department Contacts:

#### Admissions:

Kornberg School of Dentistry Office of Graduate Education  
3223 N. Broad Street (600-00), Philadelphia, PA 19140  
dentalgrad@temple.edu  
215-707-3305

#### Program Director:

Dr. Marc Herman  
marc.herman@temple.edu  
215-707-5934

## Dentistry Certificate: Dental Public Health

KORNBERG SCHOOL OF DENTISTRY

Learn more about the certificate in Dental Public Health.

## About the Certificate

Dental public health is the science and art of preventing and controlling dental diseases and promoting oral health through organized community efforts. These community efforts include assessments of oral health status and need for care, the use of scientific knowledge to influence oral health policy, and diligence to ensure adequate services are available and provided to achieve community health goals.

Kornberg School of Dentistry's Dental Public Health Residency Program is accredited by the American Dental Association's Commission on Dental Accreditation (CODA) as of February 4, 2016. This certificate program adheres to the guidelines of the American Board of Dental Public Health (ABDPH). It is designed to allow dentists with the Master of Public Health (MPH) degree to complete the educational requirements for Board certification as a specialist in Dental Public Health.

The goal of the residency program in dental public health at Kornberg School of Dentistry is to provide the necessary educational preparation for dentists so they can:

- practice dental public health,
- take and pass the ABDPH examination and achieve Diplomate status, and
- design, conduct and lead dental public health research projects.

**Time Limit for Certificate Completion:** 1 year full-time; 3 years part-time

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** This certificate program can be completed on a full- or part-time basis. NOTE: International students must enroll full time in the certificate program to be eligible to apply for a student visa based on admission to the certificate program. Please contact the Department of Oral Health Sciences' admissions advisor for more information.

**Job Prospects:** Graduates of the program promote oral health in various capacities working with countless community programs tackling an expansive range of dental public health issues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and approval from the Kornberg School of Dentistry's Office of Graduate Education.

**Financing Opportunities:** Limited financial support is available for dental residents.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* September 1 to start the following year

*APPLY ONLINE to this professional certificate program.*

Applications are received on a rolling basis, but it is strongly recommended that all documents be submitted no later than September 1. Incomplete applications are not evaluated.

Two individuals are selected each year for full-time matriculation in the Dental Public Health Residency Program. Preference is given to academically accomplished candidates and those with demonstrable maturity in research, clinical care or service. Individuals with high GPAs

and strong letters of recommendation are encouraged to apply. The admissions process ensures a fair, unbiased and nondiscriminatory admissions policy.

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from public health faculty and professionals.

**Degree Required for Admission Consideration:** Applicants must hold both:

- a DDS or DMD degree from a dental school accredited according to the standards of the American Dental Association's Commission on Dental Accreditation (CODA), and
- an MPH degree from a U.S. or Canadian school of public health. Candidates with other master's degrees may submit an inquiry to the program director.

International applicants must verify that their training is equivalent to a CODA-accredited institution by using one of these foreign academic credentialing services: World Education Services or Education Credential Evaluators.

**Statement of Goals:** This personal statement includes your specific interest in Temple's DPH Residency program, your research and future career goals, and your previous academic and research achievements. The statement should not exceed 2,000 words.

**Standardized Test Scores:**

ADAT: Not required.

TOEFL iBT: 100 minimum required.

**Transcripts and Credential Evaluation:** Official transcripts from all colleges, universities and dental schools attended must be submitted. GPA and class rank should be identified.

**Resume:** Current resume or CV required.

**Writing Sample:** An academic paper written during the master's program must be submitted.

**Acceptance:** Resident selection is accomplished by the Dental Public Health (DPH) Program Committee. The Committee consists of the Program Director as Chair, two additional DPH faculty members, and one non-DPH faculty member from the College of Public Health. The committee members review every applicant's folder and decide whether to grant an interview to the applicant based on the GPA in both dental school and the MPH program, previous public health education, letters of recommendation, and any other supplemental information.

Upon review of all completed applications, the DPH Program Committee extends invitations for interviews to those applicants under serious consideration for acceptance. Interviewees are required to visit Temple University for a personal interview, although being granted an interview does not guarantee admission into the program.

## Certificate Requirements

*Number of Credits Required:* 32

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
DPHS 5089	Planning and Evaluation of Field Experience in Dental Public Health	5
DPHS 8001	Foundations of Dental Public Health	3
DPHS 8002	Administration in Dental Public Health	2
DPHS 8003	Epidemiology and Prevention of Oral Diseases	3
DPHS 8005	Provision and Financing of Dental Public Health	2
DPHS 8007	Analysis of Oral Dental Health Data (2 terms) <sup>1</sup>	2
DPHS 8009	Applied Statistical Analysis of Oral Health Data	1
DPHS 9991	Research in Dental Public Health <sup>1</sup>	11
<b>Elective <sup>2</sup></b>		<b>3</b>
<b>Total Credit Hours</b>		<b>32</b>

1

Course can be repeated for additional credit.

2

The elective is expected to be taken outside of Dental Public Health Sciences at the 5000 level or higher. Suggested areas of study for the course are advanced biostatistics, communication management and research methods, effective organizational communication, epidemiology, health management and policy, leadership development, and management of productive working teams.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/dental-public-health-certificate-graduate-dn-dph-dent>

### Department Information:

Dept. of Oral Health Sciences  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street  
Philadelphia, PA 19140  
dentalgrad@temple.edu  
215-707-1773

### Submission Address for Application Materials:

[https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/)

### Department Contacts:

*Admissions:*

Dept. of Oral Health Sciences  
dentalgrad@temple.edu  
215-707-2810  
215-707-3305

*Program Director:*

Dr. Marisol Tellez Merchan  
DPH Residency Director  
marisol@temple.edu  
215-707-1773

# Dentistry Certificate: Endodontics

KORNBERG SCHOOL OF DENTISTRY

Learn more about the certificate in Endodontics.

## About the Certificate

The postgraduate certificate in Endodontics is a full-time, 24-month program accredited by the American Dental Association's Commission on Dental Accreditation (CODA). This certificate program also fulfills the educational requirements for specialty board certification by the American Board of Endodontics.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is required.

**Job Prospects:** Students who graduate from the Endodontology program are well prepared to pursue a specialized career in endodontics, whether in academics, administration, clinical and private practice, or research. Graduates have expertise in endodontics and oral biology, as well as the experience and compassion necessary for a patient-centered practice.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and approval from the Kornberg School of Dentistry's Office of Graduate Education.

**Financing Opportunities:** Limited financial support is available for dental residents.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* August 1

APPLY ONLINE to this professional certificate program.

Applicants for the Endodontics certificate program must utilize the Postdoctoral Application Support Service (PASS), which is a centralized application service sponsored by the American Dental Education Association (ADEA) for individuals applying to advanced dental education programs. The ADEAPASS® application must be completed.

All Endodontics applicants must submit their application materials to PASS by July 15 to allow PASS sufficient time to process their materials and submit them to Temple by our August 1 deadline. Please check with PASS to ensure that your information has been received as they will only forward completed records to Temple University for assessment.

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from dental school faculty or supervisors. At least two of the letters must be written by faculty who can evaluate the applicant's clinical skills.

**Degree Required for Admission Consideration:** Applicants must hold the DDS or DMD degree from a U.S. or Canadian dental school accredited according to the standards of the American Dental Association's Commission on Dental Accreditation (CODA).

International applicants must verify that their training is equivalent to a CODA-accredited institution by using one of these foreign academic credentialing services: World Education Services or Education Credential Evaluators.

**Standardized Test Scores:**

NBDE: Required. All applicants must have passed the National Board Dental Examination (NBDE) Part I and Part II. If the applicant is currently a senior dental student, results from Part II may be forwarded directly to Kornberg School of Dentistry once received. If the Integrated National Board Dental Examination (INBDE) was taken, evidence must be provided of satisfactory completion of the exam.

TOEFL iBT: 100 minimum required.

**Transcripts and Credential Evaluation:** Official transcripts from all colleges, universities and dental schools attended must be submitted. Transcripts should include GPA and class rank. Submit transcripts through the ADEAPASS® application.

Note that PASS does not accept undergraduate college transcripts. Applicants must send official transcripts for their undergraduate study directly to Kornberg School of Dentistry at [https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/) as part of the required Temple University application identified below.

**Resume:** Current resume required. Submit resume through the ADEAPASS® application.

**Supplemental Document:** When applying to the Endodontics certificate program, a separate Temple University application and application fee of \$50 are required. SUBMIT ONLINE the Temple application and fee.

## Certificate Requirements

*Number of Credits Required:* 131.5

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology	1
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
<b>Additional Courses</b>		
ENDG 8112	Pulp Biology <sup>2</sup>	2
ENDG 8113	Periapical Biology <sup>2</sup>	2
ENDG 8115	Current Clinical Concepts	2
ENDG 8118	Endodontic Microsurgery	2.5
ENDG 8119	Teaching for Sophomore Preclinical Lab	4
ENDG 8120	Clinical Seminar in Endodontology <sup>3</sup>	8
ENDG 8123	Endodontic Methods and Materials I <sup>2</sup>	2

ENDG 8124	Endodontic Methods and Materials II <sup>2</sup>	2
ENDG 8130	Current Endodontics Literature Review <sup>3</sup>	4
ENDG 8131	Endodontic Topics I	2
ENDG 8132	Endodontic Topics II	2
ENDG 9185	Emergency Endodontics Clinic <sup>3</sup>	15
ENDG 9285	Endodontics Clinic <sup>3</sup>	60
OHSC 9991	Research in Oral Health Sciences <sup>3</sup>	6
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>3</sup>	8

**Total Credit Hours** 131.5

1

Core courses are required of all first-year postgraduate students.

2

Course is offered in alternate years.

3

Course is repeatable for additional credit.

## Proposed Plan of Study Outlined by Year and Term

Year 1		Credit Hours
<b>Fall</b>		
Select one from the following:		2
ENDG 8112 Pulp Biology <sup>1</sup>		
ENDG 8113 Periapical Biology <sup>1</sup>		
ENDG 8115	Current Clinical Concepts	2
ENDG 8120	Clinical Seminar in Endodontology <sup>2</sup>	2
ENDG 8130	Current Endodontics Literature Review <sup>2</sup>	1
ENDG 8131	Endodontic Topics I	2
ENDG 9185	Emergency Endodontics Clinic <sup>2</sup>	3
ENDG 9285	Endodontics Clinic <sup>2</sup>	12
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology	1
OHSC 9991	Research in Oral Health Sciences <sup>2</sup>	2
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>2</sup>	2
<b>Credit Hours</b>		<b>33</b>

<b>Spring</b>		
ENDG 8118	Endodontic Microsurgery	2.5
ENDG 8119	Teaching for Sophomore Preclinical Lab	2
ENDG 8120	Clinical Seminar in Endodontology <sup>2</sup>	2
Select one from the following:		2
ENDG 8123 Endodontic Methods and Materials I <sup>1</sup>		
ENDG 8124 Endodontic Methods and Materials II <sup>1</sup>		
ENDG 8130	Current Endodontics Literature Review <sup>2</sup>	1
ENDG 8132	Endodontic Topics II	2
ENDG 9185	Emergency Endodontics Clinic <sup>2</sup>	3
ENDG 9285	Endodontics Clinic <sup>2</sup>	12
OHSC 8011	Molecular Oral and Craniofacial Biology	1

OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
OHSC 9991	Research in Oral Health Sciences <sup>2</sup>	2
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>2</sup>	2
<b>Credit Hours</b>		<b>35.5</b>

### Year 2

<b>Fall</b>		
Select one from the following that was not previously taken:		2
ENDG 8112 Pulp Biology <sup>1</sup>		
ENDG 8113 Periapical Biology <sup>1</sup>		
ENDG 8120	Clinical Seminar in Endodontology <sup>2</sup>	2
ENDG 8130	Current Endodontics Literature Review <sup>2</sup>	1
ENDG 9185	Emergency Endodontics Clinic <sup>2</sup>	3
ENDG 9285	Endodontics Clinic <sup>2</sup>	12
OHSC 9991	Research in Oral Health Sciences <sup>2</sup>	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>2</sup>	2
<b>Credit Hours</b>		<b>23</b>

### Spring

ENDG 8119	Teaching for Sophomore Preclinical Lab	2
ENDG 8120	Clinical Seminar in Endodontology <sup>2</sup>	2
Select one from the following that was not previously taken:		2
ENDG 8123 Endodontic Methods and Materials I <sup>1</sup>		
ENDG 8124 Endodontic Methods and Materials II <sup>1</sup>		
ENDG 8130	Current Endodontics Literature Review <sup>2</sup>	1
ENDG 9185	Emergency Endodontics Clinic <sup>2</sup>	3
ENDG 9285	Endodontics Clinic <sup>2</sup>	12
OHSC 9991	Research in Oral Health Sciences <sup>2</sup>	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>2</sup>	2
<b>Credit Hours</b>		<b>25</b>

### Summer

ENDG 9185	Emergency Endodontics Clinic <sup>2</sup>	3
ENDG 9285	Endodontics Clinic <sup>2</sup>	12
<b>Credit Hours</b>		<b>15</b>
<b>Total Credit Hours</b>		<b>131.5</b>

1

Course is offered in alternate years.

2

Course is repeatable for additional credit.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/endodontics-certificate-graduate-dn-endg-dent>

### Department Information:

Dept. of Endodontology  
Temple University Kornberg School of Dentistry

3223 N. Broad Street  
Philadelphia, PA 19140  
gradendo@temple.edu  
215-707-2810

## Submission Address for PASS Application Materials:

[https://www.adea.org/dental\\_education\\_pathways/PASS/applicants/Pages/default.aspx](https://www.adea.org/dental_education_pathways/PASS/applicants/Pages/default.aspx)

## Postdoctoral Application Support Service (PASS) Contacts:

passinfo@passweb.org  
617-612-2065

## Submission Address for Temple University Application Materials:

[https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/)

## Department Contacts:

### Admissions:

Kornberg School of Dentistry Office of Graduate Education  
3223 N. Broad Street (600-00), Philadelphia, PA 19140  
dentalgrad@temple.edu  
215-707-3305

### Program Director:

Dr. Maobin Yang  
maobin.yang@temple.edu  
215-707-5789

# Dentistry Certificate: Oral and Maxillofacial Surgery

KORNBERG SCHOOL OF DENTISTRY

Learn more about the certificate in Oral and Maxillofacial Surgery.

## About the Certificate

Oral and maxillofacial surgery (OMS) is one of ten dental specialties approved by the American Dental Association. These dental specialists treat conditions, defects, injuries and aesthetic aspects of the mouth, teeth, jaws and face. Among their specializations are inserting dental implants, extracting wisdom teeth, surgically correcting cleft lips and palates and other maxillofacial skeletal deformities, and diagnosing and managing temporomandibular joint (TMJ) disorders.

The OMS certificate program at Kornberg School of Dentistry is designed as a companion to the MD degree program at Temple University's Lewis Katz School of Medicine. This creates a combined MD degree/OMS certificate residency program that:

- allows Kornberg School of Dentistry to provide comprehensive oral surgical care at all levels, from simple extraction to care that requires hospitalization, with Kornberg faculty providing didactic and clinical instruction and supervision as a primary rotational site for the residency;
- extends Kornberg School of Dentistry's support to its large predoctoral program and other specialty programs, such as advanced

education in general dentistry, implantology and periodontology, by expanding the collaboration between various Kornberg predoctoral and graduate-level dental clinical services; and

- increases the capacity of Temple University Hospital to manage oral maxillofacial trauma and emergency care.

The goal of the certificate program at Kornberg School of Dentistry is to ensure that the large number of patients who annually need advanced oral and maxillofacial surgical procedures, which are beyond the capabilities of predoctoral dental students, can gain the assistance they need at Temple University. Offering the OMS certificate allows the Kornberg School of Dentistry to achieve its mission of:

- promoting health and wellness through the comprehensive education of diverse general and specialty dentists utilizing inter-professional collaboration;
- providing compassionate, comprehensive, patient-centered, evidence-based and outcome-driven oral healthcare;
- engaging in research and scholarly activities; and
- serving the community.

Although no credit hour requirements are set by the American Dental Association's Commission on Dental Accreditation (CODA), the certificate awarded by the Kornberg School of Dentistry is for completion of the requirements for the Oral and Maxillofacial Surgery certificate as defined by CODA.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** This certificate program is expected to be completed on a full-time basis. NOTE: International students must enroll full-time in the certificate program to be eligible to apply for a student visa based on admission to the certificate program. Please contact the admissions advisor in the Department of Oral and Maxillofacial Pathology, Medicine and Surgery for more information.

**Job Prospects:** Graduates of the program are prepared to provide advanced oral and maxillofacial surgical procedures for community members in need of such services.

**Non-Matriculated Student Policy:** Participation in the certificate program is limited to enrolled students.

**Financing Opportunities:** Limited financial support is available.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer:* September 15 to start on July 1 of the following year

[APPLY ONLINE to this professional certificate program through ADEA PASS®.](#)

Also APPLY ONLINE to the Postdoctoral Dental Matching Program.

Applicants for the OMS certificate program must utilize the Postdoctoral Application Support Service (PASS), which is a centralized application service sponsored by the American Dental Education Association (ADEA) for individuals applying to advanced dental education programs. The ADEAPASS® application must be completed.

All OMS applicants must submit their application materials to PASS by September 15 to allow PASS sufficient time to process their materials and submit them to Temple by our October 1 deadline. Please check with PASS to ensure that your information has been received as they will only forward completed records to Temple University for assessment.

All OMS applicants are also required to apply to the Postdoctoral Dental Matching Program through National Matching Services Inc.

Note that every applicant must be a U.S. or Canadian citizen or hold U.S. Permanent Resident status.

#### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from dental school faculty. At least two of the letters must be written by faculty who can evaluate the applicant's clinical skills.

**Degree Required for Admission Consideration:** Applicants must hold the DDS or DMD degree from a U.S. or Canadian dental school accredited according to the standards of the American Dental Association's Commission on Dental Accreditation (CODA).

#### Standardized Test Scores:

NBDE: Required. All applicants must have passed the National Board Dental Examination (NBDE) Part I and Part II. If the Integrated National Board Dental Examination (INBDE) was taken, evidence must be provided of satisfactory completion of the exam. Applicants are encouraged to upload official scores in the PASS application, but may also mail them to the Kornberg School of Dentistry.

TOEFL iBT: 100 minimum required.

**Transcripts and Credential Evaluation:** Official transcripts from all colleges, universities and dental schools attended must be submitted. Transcripts should include GPA and class rank. Submit transcripts through the ADEAPASS® application.

Note that PASS does not accept undergraduate college transcripts. Applicants must send official transcripts for their undergraduate study directly to Kornberg School of Dentistry at [https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/) as part of the required Temple University application identified below.

**Resume:** Current resume required. Submit resume through the ADEAPASS® application.

**Supplemental Document:** When applying to the OMS certificate program, a separate Temple University application and application fee of \$50 are required. SUBMIT ONLINE the Temple application and fee.

**Acceptance:** Applicants will be notified of their admission consideration by National Matching Services Inc.

## Certificate Requirements

*Number of Credits Required:* 5

*Required Courses:*

Code	Title	Credit Hours
ORBG 8014		1
ORBG 8015		1

ORBG 8017	1
ORBG 8018	1
ORBG 8019	1
<b>Total Credit Hours</b>	<b>5</b>

#### Additional Curricula and Assessments

##### Formal:

OMS residents participate in weekly seminars and lectures, in addition to monthly grand rounds, with topics ranging from surgical anatomy to professionalism and practice management. Although no formative or summative assessments are required, these curricular elements constitute a part of the longitudinal learning process of the OMS residency. The performance of residents on the annual Oral and Maxillofacial Surgery In-Training Examination (OMSITE) measures their clinical knowledge and skills.

OMS residents also engage in simulation training exercises throughout their clinical training. Debriefing and formative assessments are integral parts of these exercises.

##### Informal:

Throughout their surgical training, OMS residents participate in the daily educational experience of teaching rounds when patients are admitted to the hospital. These teaching rounds utilize the principles of directed and case-based learning. While no formal assessments are required, the learners' engagement and performance in the learning process are noted by the faculty and discussed at debriefing sessions or during the residents' semi-annual evaluations.

In clinical education and experiential learning, ongoing dialogue occurs between the residents and faculty. Although informal, this is perhaps the most important assessment of the residents' knowledge base, skills, preparedness and professionalism with respect to direct patient care. Trained and calibrated faculty communicate their assessment with the program director in preparation for the residents' semi-annual evaluations.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/oral-and-maxillofacial-surgery-certificate-graduate-dn-ormx-dent>

### Department Information:

Dept. of Oral and Maxillofacial Pathology, Medicine and Surgery  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street  
Philadelphia, PA 19140  
dentalgrad@temple.edu  
215-707-7415

### Submission Address for PASS Application Materials:

[https://www.adea.org/dental\\_education\\_pathways/PASS/applicants/Pages/default.aspx](https://www.adea.org/dental_education_pathways/PASS/applicants/Pages/default.aspx)

### Postdoctoral Application Support Service (PASS) Contacts:

[passinfo@passweb.org](mailto:passinfo@passweb.org)



617-612-2065

## Submission Address for Temple University Application Materials:

[https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/)

## Submission Address for Application to the Postdoctoral Dental Matching Program:

<https://natmatch.com/dentres/>

## Department Contacts:

### Admissions:

Dept. of Oral and Maxillofacial Pathology, Medicine and Surgery  
dentalgrad@temple.edu  
215-707-7415

### Program Director:

Mehran Hossaini, DMD  
Department Chair  
mhossaini@temple.edu  
215-707-6294

## Dentistry Certificate: Orthodontics

KORNBERG SCHOOL OF DENTISTRY

Learn more about the certificate in Orthodontics.

### About the Certificate

The postgraduate certificate in Orthodontics at Kornberg School of Dentistry emphasizes evidence-based, patient-centered and outcome-driven care. The Orthodontics curriculum incorporates advanced understanding of cutting-edge orthodontic instrumentation, with a focus on wire manipulation and clinical biomechanics. Study of dental literature, research, theories, technological advancements and therapeutic procedures is applied to the diagnosis and treatment of patients. Skills are also developed for the sound management of one's own clinical practice.

Matriculation in the Orthodontics program starts in July of each year. Dentists are expected to maintain continuous residency status over the course of the program. Completion of the certificate also awards residents a concurrent Master of Science degree in Oral Health Sciences.

**Time Limit for Certificate Completion:** 26 months

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is required.

**Job Prospects:** The postdoctoral certificate program prepares residents to become qualified specialists in orthodontics with expertise in applied basic sciences, clinical biomechanics, compassionate care for patients, and diagnosis and treatment planning. Residents receive advanced didactic and clinical instruction across all aspects of the discipline in preparation for a career as an orthodontist in settings such as academics, clinical practice and research. Graduates are prepared to pursue certification by the American Board of Orthodontics.

**Licensure/Certification:** Students who complete the certificate in Orthodontics are eligible to sit for the American Board of Orthodontics (ABO) exam. A written examination must first be completed before the clinical examination can be taken. When both examinations are successfully completed, the orthodontist may become board certified by the ABO. The awarded certificate is time limited. By the end of the time-limited certificate, the board-certified orthodontist must have taken the appropriate renewal examination to retain board certification.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and approval from the Kornberg School of Dentistry's Office of Graduate Education.

**Financing Opportunities:** Limited financial support is available for dental residents.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer:* August 15 to start the following year

[APPLY ONLINE to this professional certificate program through ADEA PASS®.](#)

Also APPLY ONLINE to the Postdoctoral Dental Matching Program.

Applicants for the Orthodontics certificate program must utilize the Postdoctoral Application Support Service (PASS), which is a centralized application service sponsored by the American Dental Education Association (ADEA) for individuals applying to advanced dental education programs. The ADEA PASS® application must be completed.

All Orthodontics applicants must submit their application materials to PASS by August 15 to allow PASS sufficient time to process their materials and submit them to Temple by our September 1 deadline. Please check with PASS to ensure that your information has been received as they will only forward completed records to Temple University for assessment.

All Orthodontics applicants are also required to apply to the Postdoctoral Dental Matching Program through National Matching Services Inc.

Six individuals are selected each year for full-time matriculation into the Orthodontics certificate program. Preference is given to academically accomplished candidates and those with demonstrable maturity in research, clinical care or service. Individuals with high GPAs and strong letters of recommendation are encouraged to apply. The admissions process ensures a fair, unbiased and nondiscriminatory admissions policy.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from dental school faculty or supervisors. At least two of the letters must be written by faculty who can evaluate the applicant's clinical skills.

**Degree Required for Admission Consideration:** Applicants must hold the DDS or DMD degree from a U.S. or Canadian dental school accredited according to the standards of the American Dental Association's Commission on Dental Accreditation (CODA).

International applicants must verify that their training is equivalent to a CODA-accredited institution by using one of these foreign academic

credentialing services: World Education Services or Education Credential Evaluators.

**Statement of Goals:** In no more than 2,000 words, address your specific interest in Temple University's Orthodontics certificate program, your research and future career goals, and your previous academic and research achievements.

**Standardized Test Scores:**

ADAT: Not required.

GRE: Required.

NBDE: Required. All applicants must have passed the National Board Dental Examination (NBDE) Part I and Part II. If the applicant is currently a senior dental student, results from Part II may be forwarded directly to Kornberg School of Dentistry once received.

TOEFL iBT: 100 minimum required.

**Transcripts and Credential Evaluation:** Official transcripts from all colleges, universities and dental schools attended must be submitted. Transcripts should include GPA and class rank. Submit transcripts through the ADEAPASS® application.

Note that PASS does not accept undergraduate college transcripts. Applicants must send official transcripts for their undergraduate study directly to Kornberg School of Dentistry at the following address:

Dept. of Orthodontics  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street (600-00)  
Philadelphia, PA 19140

**Resume:** Current resume or CV required. Submit resume through the ADEA PASS® application.

**Supplemental Documents:** The following documents required for the Orthodontics certificate program are to be sent directly to the Kornberg School of Dentistry in one envelope to the address listed above:

- A check in the amount of \$50 made payable to Temple University Kornberg School of Dentistry. This covers a separate application fee required when applying to the Orthodontics program. Payment should be remitted in a U.S. bank check or U.S. money order as international checks are not accepted.
- A 2x2 photo of the applicant's face.

**Acceptance:** Applicants who are accepted into the Orthodontics certificate program are rank-ordered, and their names are submitted to National Matching Services Inc. Notification of their match with a program occurs on the date chosen by National Matching Services Inc.

## Certificate Requirements

*Number of Credits Required: 179*

*Required Courses:*

Code	Title	Credit Hours
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1

OHSC 8015	Research Methodology and Study Design	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology	1
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	4
OHSC 9993	Master's Research Qualifying Examination	1
OHSC 9996	Master's Thesis in Oral Health Sciences	1
ORTG 8400	Diagnosis and Treatment Planning Conference <sup>1</sup>	16
ORTG 8401	Orthodontic Technique Lab	6
ORTG 8403	Orthodontic Diagnosis and Treatment Plan Seminar	2
ORTG 8404	Orthodontic Biomechanics	2
ORTG 8407	History of Orthodontics	1
ORTG 8408	Craniofacial Cephalometrics	3
ORTG 8410	Current Literature Review <sup>1</sup>	4
ORTG 8414	Growth and Development of the Craniofacial Complex	2
ORTG 8416	Clinical Biomechanics	1
ORTG 8417	Introduction to Basic Principles of Orthodontics (Lab)	2
ORTG 8418	Introduction to Basic Principles of Orthodontics (Seminar)	3
ORTG 8419	Orthodontic Principles and Techniques <sup>1</sup>	3
ORTG 8421	3-D Imaging and Computer Generated Orthodontics	2
ORTG 8423	Progress Conference and Case Review <sup>1</sup>	4
ORTG 8424	Biology of Tooth Movement	2
ORTG 8425	Classic Literature Review	1
ORTG 8426	Multidisciplinary and Adult Orthodontics	2
ORTG 8427	American Board of Orthodontics Preparation Course	2
ORTG 8428	ABO Mock Boards	1
ORTG 8430	Advance Orthodontic Principles and Techniques <sup>1</sup>	4
ORTG 8431	Thesis; Scientific Writing and Preparation Course <sup>1</sup>	1
ORTG 8513	Operations Management for Orthodontic Practice II	2
ORTG 9487	Dento-Facial Anomalies Conference <sup>1</sup>	4
ORTG 9489	Extracurricular Education <sup>1</sup>	8
ORTG 9587	Graduate Orthodontic Clinic <sup>1</sup>	54
ORTG 9588	Graduate Orthodontic Screening Clinic <sup>1</sup>	23
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	8

**Total Credit Hours** **179**

1

Course is repeatable for additional credit.

## Suggested Plan of Study Outlined by Year and Term

Year 1		
Fall		Credit Hours
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology	1
OHSC 9993	Master's Research Qualifying Examination	1
ORTG 8400	Diagnosis and Treatment Planning Conference <sup>1</sup>	4
ORTG 8401	Orthodontic Technique Lab	6
ORTG 8403	Orthodontic Diagnosis and Treatment Plan Seminar	2
ORTG 8404	Orthodontic Biomechanics	2
ORTG 8407	History of Orthodontics	1
ORTG 8408	Craniofacial Cephalometrics	3
ORTG 8410	Current Literature Review <sup>1</sup>	1
ORTG 8414	Growth and Development of the Craniofacial Complex	2
ORTG 8417	Introduction to Basic Principles of Orthodontics (Lab)	2
ORTG 8418	Introduction to Basic Principles of Orthodontics (Seminar)	3
ORTG 8419	Orthodontic Principles and Techniques <sup>1</sup>	2
ORTG 8431	Thesis; Scientific Writing and Preparation Course <sup>1</sup>	1
ORTG 9487	Dento-Facial Anomalies Conference <sup>1</sup>	1
ORTG 9489	Extracurricular Education <sup>1</sup>	2
ORTG 9587	Graduate Orthodontic Clinic <sup>1</sup>	12
ORTG 9588	Graduate Orthodontic Screening Clinic <sup>1</sup>	6
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
<b>Credit Hours</b>		<b>58</b>
Spring		
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	2
ORTG 8400	Diagnosis and Treatment Planning Conference <sup>1</sup>	4
ORTG 8410	Current Literature Review <sup>1</sup>	1
ORTG 8419	Orthodontic Principles and Techniques <sup>1</sup>	1
ORTG 8421	3-D Imaging and Computer Generated Orthodontics	2
ORTG 8423	Progress Conference and Case Review <sup>1</sup>	1
ORTG 8424	Biology of Tooth Movement	2
ORTG 8513	Operations Management for Orthodontic Practice II	2
ORTG 9487	Dento-Facial Anomalies Conference <sup>1</sup>	1
ORTG 9489	Extracurricular Education <sup>1</sup>	2

ORTG 9587	Graduate Orthodontic Clinic <sup>1</sup>	12
ORTG 9588	Graduate Orthodontic Screening Clinic <sup>1</sup>	4
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
<b>Credit Hours</b>		<b>41</b>
Year 2		
Fall		
OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	2
ORTG 8400	Diagnosis and Treatment Planning Conference <sup>1</sup>	4
ORTG 8410	Current Literature Review <sup>1</sup>	1
ORTG 8423	Progress Conference and Case Review <sup>1</sup>	2
ORTG 8425	Classic Literature Review	1
ORTG 8426	Multidisciplinary and Adult Orthodontics	2
ORTG 8430	Advance Orthodontic Principles and Techniques <sup>1</sup>	2
ORTG 9487	Dento-Facial Anomalies Conference <sup>1</sup>	1
ORTG 9489	Extracurricular Education <sup>1</sup>	2
ORTG 9587	Graduate Orthodontic Clinic <sup>1</sup>	12
ORTG 9588	Graduate Orthodontic Screening Clinic <sup>1</sup>	6
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
<b>Credit Hours</b>		<b>37</b>
Spring		
OHSC 9996	Master's Thesis in Oral Health Sciences	1
ORTG 8400	Diagnosis and Treatment Planning Conference <sup>1</sup>	4
ORTG 8410	Current Literature Review <sup>1</sup>	1
ORTG 8416	Clinical Biomechanics	1
ORTG 8423	Progress Conference and Case Review <sup>1</sup>	1
ORTG 8427	American Board of Orthodontics Preparation Course	2
ORTG 8430	Advance Orthodontic Principles and Techniques <sup>1</sup>	2
ORTG 9487	Dento-Facial Anomalies Conference <sup>1</sup>	1
ORTG 9489	Extracurricular Education <sup>1</sup>	2
ORTG 9587	Graduate Orthodontic Clinic <sup>1</sup>	12
ORTG 9588	Graduate Orthodontic Screening Clinic <sup>1</sup>	4
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
<b>Credit Hours</b>		<b>33</b>
Summer		
ORTG 8428	ABO Mock Boards	1
ORTG 9587	Graduate Orthodontic Clinic <sup>1</sup>	6
ORTG 9588	Graduate Orthodontic Screening Clinic <sup>1</sup>	3
<b>Credit Hours</b>		<b>10</b>
<b>Total Credit Hours</b>		<b>179</b>

<sup>1</sup>  
Course is repeatable for additional credit.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/orthodontics-certificate-graduate-dn-ortg-dent>

## Department Information:

Dept. of Orthodontics  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street  
Philadelphia, PA 19140  
dentalgrad@temple.edu  
215-707-2866

## Submission Address for PASS Application Materials:

[https://www.adea.org/dental\\_education\\_pathways/PASS/applicants/Pages/default.aspx](https://www.adea.org/dental_education_pathways/PASS/applicants/Pages/default.aspx)

## Postdoctoral Application Support Service (PASS) Contacts:

passinfo@passweb.org  
617-612-2065

## Mailing Address for Undergraduate Transcripts and Supplemental Documents:

Dept. of Orthodontics  
Kornberg School of Dentistry Office of Graduate Education  
3223 N. Broad Street (600-00)  
Philadelphia, PA 19140

## Submission Address for Application to the Postdoctoral Dental Matching Program:

<https://natmatch.com/dentres/>

## Department Contacts:

*Admissions:*  
Luz DeJesus  
luz.dejesus@temple.edu  
215-707-7733

*Program Director:*  
Jeffrey H. Godel, DMD, MS  
Associate Professor  
jeffrey.godel@temple.edu  
215-707-4002

## Dentistry Certificate: Periodontics

KORNBERG SCHOOL OF DENTISTRY

Learn more about the certificate in Periodontics.

### About the Certificate

The postgraduate certificate in Periodontology provides qualified dentists with specialized clinical training and research-focused education in periodontology and oral implantology, with a particular emphasis on surgical oral implantology. Students earn a certificate in Periodontics and a simultaneous Master of Science in Oral Health Sciences.

The rigorous 36-month, full-time postgraduate program prepares students for practice, teaching and research in periodontology and oral implantology. Students receive advanced education related to the attachment apparatus of the dentition, as well as the diseases and

conditions that affect teeth. Students also study the prevention, diagnosis and treatment of diseases.

**Time Limit for Certificate Completion:** 36 months

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is required.

**Job Prospects:** Students who graduate with the Periodontology certificate program are well prepared to pursue a specialized career in periodontics, whether in academics, administration, clinical and private practice, or research. Graduates have expertise in periodontics and oral biology, as well as the experience and compassion necessary for a patient-centered practice.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and approval from the Kornberg School of Dentistry's Office of Graduate Education.

**Financing Opportunities:** Limited financial support is available for dental residents.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer:* September 15 to start the following year

[APPLY ONLINE to this professional certificate program through ADEA PASS®.](#)

Also APPLY ONLINE to the Postdoctoral Dental Matching Program.

Applicants for the Periodontics certificate program can utilize the Postdoctoral Application Support Service (PASS), which is a centralized application service sponsored by the American Dental Education Association (ADEA) for individuals applying to advanced dental education programs. The ADEAPASS® application must be completed.

All Periodontics applicants must submit their application materials to PASS by September 15 to allow PASS sufficient time to process their materials and submit them to Temple by our October 1 deadline. Please check with PASS to ensure that your information has been received as they will only forward completed records to Temple University for assessment.

All Periodontics applicants are also required to apply to the Postdoctoral Dental Matching Program through National Matching Services Inc.

Four individuals are selected each year for full-time matriculation into the Periodontics certificate program. Preference is given to academically accomplished candidates who have one or more years of clinical practice experience or have completed a General Practice Residency (GPR) or an Advanced Education in General Dentistry (AEGD) program. Preference is also given to applicants with prior research experience/training, scientific publications and/or prior advanced degrees in basic science/biomedical fields.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from dental school faculty. At least two of the letters must be written by faculty who can evaluate the applicant's clinical skills. These must be on appropriate letterhead and sent directly from the dental school faculty

to the Program Director at the Kornberg School of Dentistry's Office of Graduate Education.

**Degree Required for Admission Consideration:** Applicants must hold the DDS or DMD degree from a U.S. or Canadian dental school accredited according to the standards of the American Dental Association's Commission on Dental Accreditation (CODA).

International applicants must verify that their training is equivalent to a CODA-accredited institution by using one of these foreign academic credentialing services: World Education Services or Education Credential Evaluators.

**Standardized Test Scores:**

NBDE: Required. All applicants must have passed the National Board Dental Examination (NBDE) Part I and Part II. If the applicant is currently a senior dental student, results from Part II may be forwarded directly to Kornberg School of Dentistry once received.

TOEFL iBT: 100 minimum required.

**Transcripts and Credential Evaluation:** Official transcripts from all colleges, universities and dental schools attended must be submitted. Transcripts should include GPA and class rank. Submit transcripts through the ADEAPASS® application.

Note that PASS does not accept undergraduate college transcripts. Applicants must send official transcripts for their undergraduate study directly to Kornberg School of Dentistry at [https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/) as part of the required Temple University application identified below.

**Resume:** Current resume required. Submit resume through the ADEAPASS® application.

**Writing Sample:** An essay must be submitted.

**Supplemental Document:** When applying to the Periodontics certificate program, a separate Temple University application and application fee of \$50 are required. SUBMIT ONLINE the Temple application and fee.

**Acceptance:** Applicants who are accepted into the Periodontics certificate program are rank-ordered, and their names are submitted to National Matching Services Inc. Notification of their match with a program occurs on the date chosen by National Matching Services Inc.

## Certificate Requirements

Number of Credits Required: 124

Required Courses:

Code	Title	Credit Hours
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology	1

OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	4
OHSC 9993	Master's Research Qualifying Examination	1
OHSC 9996	Master's Thesis in Oral Health Sciences	1
PERG 8300	Periodontal Case Presentations <sup>1</sup>	12
PERG 8301	Introduction to Postgraduate Periodontology	2
PERG 8302	Biology and Pathology of the Periodontium	2
PERG 8306	Introduction to Oral Implantology	1
PERG 8309	Clinical Oral Implantology <sup>1</sup>	6
PERG 8310	Classic Periodontal Literature Review <sup>1</sup>	12
PERG 8311	Advanced Oral Implantology	1
PERG 8313	Conscious Sedation <sup>1</sup>	4
PERG 8320	Current Periodontal Literature Review <sup>1</sup>	6
PERG 8340	Oral Implantology Literature Review <sup>1</sup>	4
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	12
PERG 9385	Clinical Periodontal Practice <sup>1</sup>	36
PERG 9387	Practice Teaching Periodontology <sup>1</sup>	10
<b>Total Credit Hours</b>		<b>124</b>

1

Course is repeatable for additional credit.

## Proposed Plan of Study Outlined by Year and Term

Year 1		
Fall		Credit Hours
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology	1
PERG 8300	Periodontal Case Presentations <sup>1</sup>	2
PERG 8301	Introduction to Postgraduate Periodontology	2
PERG 8302	Biology and Pathology of the Periodontium	2
PERG 8306	Introduction to Oral Implantology	1
PERG 8310	Classic Periodontal Literature Review <sup>1</sup>	2
PERG 8313	Conscious Sedation <sup>1</sup>	2
PERG 8320	Current Periodontal Literature Review <sup>1</sup>	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
PERG 9385	Clinical Periodontal Practice <sup>1</sup>	8
PERG 9387	Practice Teaching Periodontology <sup>1</sup>	2
<b>Credit Hours</b>		<b>29</b>
Spring		
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
PERG 8300	Periodontal Case Presentations <sup>1</sup>	2
PERG 8310	Classic Periodontal Literature Review <sup>1</sup>	2

PERG 8311	Advanced Oral Implantology	1
PERG 8313	Conscious Sedation <sup>1</sup>	2
PERG 8320	Current Periodontal Literature Review <sup>1</sup>	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
PERG 9385	Clinical Periodontal Practice <sup>1</sup>	10
PERG 9387	Practice Teaching Periodontology <sup>1</sup>	2
<b>Credit Hours</b>		<b>27</b>

**Year 2****Fall**

OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	2
OHSC 9993	Master's Research Qualifying Examination	1
PERG 8300	Periodontal Case Presentations <sup>1</sup>	2
PERG 8309	Clinical Oral Implantology <sup>1</sup>	2
PERG 8310	Classic Periodontal Literature Review <sup>1</sup>	2
PERG 8320	Current Periodontal Literature Review <sup>1</sup>	1
PERG 8340	Oral Implantology Literature Review <sup>1</sup>	2
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
PERG 9385	Clinical Periodontal Practice <sup>1</sup>	8
PERG 9387	Practice Teaching Periodontology <sup>1</sup>	2
<b>Credit Hours</b>		<b>24</b>

**Spring**

OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	1
PERG 8300	Periodontal Case Presentations <sup>1</sup>	2
PERG 8309	Clinical Oral Implantology <sup>1</sup>	2
PERG 8310	Classic Periodontal Literature Review <sup>1</sup>	2
PERG 8320	Current Periodontal Literature Review <sup>1</sup>	1
PERG 8340	Oral Implantology Literature Review <sup>1</sup>	2
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
PERG 9385	Clinical Periodontal Practice <sup>1</sup>	10
PERG 9387	Practice Teaching Periodontology <sup>1</sup>	2
<b>Credit Hours</b>		<b>24</b>

**Year 3****Fall**

OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	1
PERG 8300	Periodontal Case Presentations <sup>1</sup>	2
PERG 8309	Clinical Oral Implantology <sup>1</sup>	2
PERG 8310	Classic Periodontal Literature Review <sup>1</sup>	2
PERG 8320	Current Periodontal Literature Review <sup>1</sup>	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2
<b>Credit Hours</b>		<b>10</b>

**Spring**

OHSC 9996	Master's Thesis in Oral Health Sciences	1
PERG 8300	Periodontal Case Presentations <sup>1</sup>	2
PERG 8310	Classic Periodontal Literature Review <sup>1</sup>	2
PERG 8320	Current Periodontal Literature Review <sup>1</sup>	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	2

PERG 9387	Practice Teaching Periodontology <sup>1</sup>	2
<b>Credit Hours</b>		<b>10</b>
<b>Total Credit Hours</b>		<b>124</b>

1

Course is repeatable for additional credit.

**Contacts****Certificate Program Web Address:**

<https://www.temple.edu/academics/degree-programs/periodontics-certificate-graduate-dn-perg-dent>

**Department Information:**

Dept. of Periodontology and Oral Implantology  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street, Room 301  
Philadelphia, PA 19140  
perio@temple.edu  
215-707-7667  
Fax: 215-707-7107

**Submission Address for PASS Application Materials:**

[https://www.adea.org/dental\\_education\\_pathways/PASS/applicants/Pages/default.aspx](https://www.adea.org/dental_education_pathways/PASS/applicants/Pages/default.aspx)

**Postdoctoral Application Support Service (PASS) Contacts:**

passinfo@passweb.org  
617-612-2065

**Submission Address for Temple University Application Materials:**

[https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/)

**Submission Address for Application to the Postdoctoral Dental Matching Program:**

<https://natmatch.com/dentres/>

**Department Contacts:***Admissions:*

Dept. of Periodontology and Oral Implantology  
perio@temple.edu  
215-707-7667  
Fax: 215-707-7107

*Program Director:*

Merriam Seyedain, DMD  
Assistant Professor  
seyedeh.merriam.seyedain@temple.edu  
215-707-2000

**Dentistry Certificate: Prosthodontics**

KORNBERG SCHOOL OF DENTISTRY

Learn more about the certificate in Prosthodontics.

## About the Certificate

The postgraduate certificate in Prosthodontics is a full-time, 34-month program accredited by the American Dental Association's Commission on Dental Accreditation (CODA). This certificate program also fulfills the educational requirements for specialty board certification by the American Board of Prosthodontics.

**Time Limit for Certificate Completion:** 34 months

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is required.

**Job Prospects:** Students who graduate from the Prosthodontics certificate program are well prepared to pursue a specialized career in prosthodontics, whether in academia, administration, clinical and private practice, or research. Graduates have expertise in prosthodontics and oral health sciences, as well as the experience and compassion necessary for a patient-centered practice.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* October 1

[APPLY ONLINE to this professional certificate program through ADEA PASS®.](#)

Also APPLY ONLINE to the Postdoctoral Dental Matching Program.

Applicants for the Prosthodontics certificate program must utilize the Postdoctoral Application Support Service (PASS), which is a centralized application service sponsored by the American Dental Education Association (ADEA) for individuals applying to advanced dental education programs. The ADEAPASS® application must be completed.

All Prosthodontics applicants must submit their application materials to PASS by September 15 to allow PASS sufficient time to process their materials and submit them to Temple by our October 1 deadline. Please check with PASS to ensure that your information has been received as they will only forward completed records to Temple University for assessment.

All Prosthodontics applicants are also required to apply to the Postdoctoral Dental Matching Program through National Matching Services Inc. and provide the match number.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from dental school faculty or supervisors. At least two of the letters must be written by faculty who can evaluate the applicant's clinical skills.

**Degree Required for Admission Consideration:** Applicants must hold the DDS, DMD or BDS degree from a U.S. or Canadian dental school accredited according to the standards of the American Dental Association's Commission on Dental Accreditation (CODA).

International applicants must verify that their training is equivalent to a CODA-accredited institution by using one of these foreign academic credentialing services: World Education Services (WES) or Education

Credential Evaluators (ECE). If accepted, internationally trained applicants must obtain legal foreign student status.

### Standardized Test Scores:

NBDE/INBDE: Required. All applicants must have passed Part I and Part II of the National Board Dental Examination (NBDE) or Integrated National Board Dental Examination (INBDE). If the applicant is currently a senior dental student, results from Part II may be forwarded directly to Kornberg School of Dentistry once received.

TOEFL iBT: 100 minimum required.

**Transcripts and Credential Evaluation:** Official transcripts from all colleges, universities and dental schools attended must be submitted. For those trained internationally, official transcripts with course-by-course evaluation by WES or ECE must be sent directly to Kornberg School of Dentistry. All transcripts should include GPA and class rank. Submit transcripts through the ADEAPASS® application.

Note that PASS does not accept undergraduate college transcripts. Applicants must send official transcripts for their undergraduate study directly to Kornberg School of Dentistry at [https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/) as part of the required Temple University application identified below.

**Resume:** Current resume required. Note that preference is given to applicants with high academic accomplishments and other significant awards as noted in their resume, e.g., advanced degrees, publications and research activities. Submit resume through the ADEAPASS® application.

**Interview with Skills Assessment:** Following initial review and evaluation of each applicant's credentials and other documents, select applicants are invited to visit the Kornberg School of Dentistry for a formal interview. The visit includes a skills assessment, which is performed by faculty who evaluate the applicant's pre-clinical and clinical skills. All expenses incurred during the interview process are the responsibility of the applicant.

**Supplemental Document:** When applying to the Prosthodontics certificate program, a separate Temple University application and application fee of \$75 are required to also enroll in the Oral Health Sciences MS program. SUBMIT ONLINE the Temple application and fee.

**Acceptance:** Offers of acceptance are made following review of the interview and skills assessment.

## Certificate Requirements

*Number of Credits Required:* 179

*Required Courses:*

Code	Title	Credit Hours
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1

OHSC 8019	Advanced Oral and Maxillofacial Radiology	1
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
OHSC 9991	Research in Oral Health Sciences <sup>1</sup>	4
OHSC 9993	Master's Research Qualifying Examination	1
OHSC 9996	Master's Thesis in Oral Health Sciences	1
PERG 8306	Introduction to Oral Implantology	1
PERG 8311	Advanced Oral Implantology	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds <sup>1</sup>	12
RDNT 8001	Fundamentals of Prosthodontics	7
RDNT 8002	Biomaterials	2
RDNT 8003	Maxillofacial Prosthetics	2
RDNT 8004	Integrated Medical Sciences	2
RDNT 8005	Board Review Seminar <sup>1</sup>	4
RDNT 8011	Implant Literature Review Seminar <sup>1</sup>	6
RDNT 8012	Current Literature Review Seminar I <sup>1</sup>	8
RDNT 8050	Advanced Prosthodontics Seminar <sup>1</sup>	4
RDNT 8183	Prosthodontics Literature Review Seminar <sup>1</sup>	30
RDNT 8187	Prosthodontic Treatment Planning Seminar <sup>1</sup>	12
RDNT 9385	Clinical Prosthodontics <sup>1</sup>	72

**Total Credit Hours** **179**

1

Course is repeated for additional credit.

<b>Year 1</b>		
<b>Fall</b>		<b>Credit Hours</b>
OHSC 8013	Introduction to Evidence-Based Dentistry	1
OHSC 8015	Research Methodology and Study Design	1
OHSC 8017	Oral Microbiology and Immunology	1
OHSC 8018	Biostatistics	1
OHSC 8019	Advanced Oral and Maxillofacial Radiology	1
PERG 8306	Introduction to Oral Implantology	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds	2
RDNT 8001	Fundamentals of Prosthodontics	7
RDNT 8002	Biomaterials	2
RDNT 8011	Implant Literature Review Seminar	1
RDNT 8050	Advanced Prosthodontics Seminar	2
RDNT 8183	Prosthodontics Literature Review Seminar	5
RDNT 8187	Prosthodontic Treatment Planning Seminar	2
RDNT 9385	Clinical Prosthodontics	12
<b>Credit Hours</b>		<b>39</b>
<b>Spring</b>		
OHSC 8011	Molecular Oral and Craniofacial Biology	1
OHSC 8012	Advanced Dental Pharmacology and Therapeutics	1
OHSC 8014	Clinical Anatomy of the Head and Neck	1
OHSC 8016	Cases in Oral and Maxillofacial Pathology	1
OHSC 8033	Bioethics and Critical Thinking in Dentistry	1
PERG 8311	Advanced Oral Implantology	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds	2
RDNT 8011	Implant Literature Review Seminar	1

RDNT 8050	Advanced Prosthodontics Seminar	2
RDNT 8183	Prosthodontics Literature Review Seminar	5
RDNT 8187	Prosthodontic Treatment Planning Seminar	2
RDNT 9385	Clinical Prosthodontics	12

**Credit Hours** **30**

#### **Year 2**

##### **Fall**

OHSC 9993	Master's Research Qualifying Examination	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds	2
RDNT 8003	Maxillofacial Prosthetics	2
RDNT 8011	Implant Literature Review Seminar	1
RDNT 8012	Current Literature Review Seminar I	2
RDNT 8183	Prosthodontics Literature Review Seminar	5
RDNT 8187	Prosthodontic Treatment Planning Seminar	2
RDNT 9385	Clinical Prosthodontics	12

**Credit Hours** **27**

##### **Spring**

OHSC 9991	Research in Oral Health Sciences	2
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds	2
RDNT 8004	Integrated Medical Sciences	2
RDNT 8011	Implant Literature Review Seminar	1
RDNT 8012	Current Literature Review Seminar I	2
RDNT 8183	Prosthodontics Literature Review Seminar	5
RDNT 8187	Prosthodontic Treatment Planning Seminar	2
RDNT 9385	Clinical Prosthodontics	12

**Credit Hours** **28**

#### **Year 3**

##### **Fall**

OHSC 9991	Research in Oral Health Sciences	2
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds	2
RDNT 8005	Board Review Seminar	2
RDNT 8011	Implant Literature Review Seminar	1
RDNT 8012	Current Literature Review Seminar I	2
RDNT 8183	Prosthodontics Literature Review Seminar	5
RDNT 8187	Prosthodontic Treatment Planning Seminar	2
RDNT 9385	Clinical Prosthodontics	12

**Credit Hours** **28**

##### **Spring**

OHSC 9996	Master's Thesis in Oral Health Sciences	1
PERG 8350	Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds	2
RDNT 8005	Board Review Seminar	2
RDNT 8011	Implant Literature Review Seminar	1
RDNT 8012	Current Literature Review Seminar I	2
RDNT 8183	Prosthodontics Literature Review Seminar	5
RDNT 8187	Prosthodontic Treatment Planning Seminar	2
RDNT 9385	Clinical Prosthodontics	12

**Credit Hours** **27**

**Total Credit Hours** **179**



## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/prosthodontics-certificate-graduate-dn-pros-dent>

### Department Information:

Dept. of Restorative Dentistry  
Temple University Kornberg School of Dentistry  
3223 N. Broad Street (600-00)  
Philadelphia, PA 19140  
dentalgrad@temple.edu  
215-707-3305

### Submission Address for PASS Application Materials:

[https://www.adea.org/dental\\_education\\_pathways/PASS/applicants/Pages/default.aspx](https://www.adea.org/dental_education_pathways/PASS/applicants/Pages/default.aspx)

### Postdoctoral Application Support Service (PASS) Contacts:

passinfo@passweb.org  
617-612-2065

### Submission Address for Temple University Application Materials:

[https://apply.temple.edu/DENTAL\\_CERT/](https://apply.temple.edu/DENTAL_CERT/)

### Submission Address for Application to the Postdoctoral Dental Matching Program:

<https://natmatch.com/dentres/>

### Department Contacts:

#### *Admissions:*

Theresa M. White, MPH, MSW, LSW  
Director of Graduate Programs  
dentalgrad@temple.edu  
215-707-3305

#### *Program Director:*

Louis DiPede, DMD, FACP  
louis.dipede@temple.edu  
215-707-9664

# College of Education and Human Development

## Mission Statement

The College of Education and Human Development at Temple University promotes education as a primary mechanism for social mobility and social justice for all learners. Our mission is to prepare all of our students as educational leaders and agents of change who employ leading-edge understandings and evidence-based practices in whatever setting they work. In our research, we conduct well-designed investigations that have the potential to improve learning and teaching, especially for historically underserved populations, and provide effective mentorship of doctoral students so that they can engage in similar kinds of investigations on their own. In our teaching, we strive to infuse our findings and those of other investigators into our coursework in ways that provide practitioners and prospective practitioners with deep understandings of both research and theory, as well as how to bring research and theory into effective practice. In our service, we endeavor to create and implement an infrastructure, policies and procedures that facilitate and enhance the implementation of the teaching and research missions of the College. Our students come from backgrounds that are economically and culturally diverse, but have in common the desire to acquire the skills they need to become the kind of teacher and/or researcher who can improve the lives of others through education.

## History

While the official date for the founding of the College of Education and Human Development is usually given as 1919, the college has included teacher preparation as part of its curricula almost from its inception. It is clear from Temple's history that the unofficial founder of the college was Laura Carnell, who began a program for the preparation of kindergarten teachers as early as 1895. The College was founded in 1919 as Teachers College. Its initial programs in elementary and then secondary education were offered largely in response to the Philadelphia school district's decision that higher positions in the city's school system would be open only to those with a college degree. As a consequence, the college began offering two-, three- and four-year programs to teachers, as well as extension work, day and evening courses, five days a week and on Saturday mornings. This intimate relationship between the college and the School District of Philadelphia characterizes almost all of the college's history. Programs of graduate study at the master's level were introduced in 1923, with the Doctor of Education degree first awarded in 1931.

Historically, Temple's College of Education and Human Development has had a significant impact on local and regional practice. The College continues to be a large provider of teachers for the School District of Philadelphia and for many suburban districts. Many principals and superintendents in neighboring regions have received their degrees from Temple. Many of their school psychologists, counselors, educational researchers and other education professionals have been prepared at Temple. In a very real sense, the College of Education and Human Development has helped to shape the educational direction of the region. In addition, recognizing that education occurs both in and out of school, the College has in recent years diversified its programs to provide preparation to those who plan to work with learners across the lifespan not only in schools but also in businesses and community-based organizations.

## Accreditation

The College of Education and Human Development is accredited by the Middle States Commission on Higher Education.

The College offers programs approved by the Pennsylvania Department of Education (PDE) that are designed for students seeking certificates to teach in early childhood/elementary, middle and secondary grades, as well as special education and business education settings.

The College offers School Psychology programs accredited by the American Psychological Association (APA), the National Association of School Psychologists (NASP), and the Pennsylvania Department of Education (PDE).

## Graduate Programs and Certificates

- Accomplished Teaching MEd (p. 187)
- Advocacy and Organizational Development MEd (p. 189)
- Applied Behavior Analysis MEd (p. 191)
- Applied Research and Evaluation PSM (p. 192)
- Career and Technical Education MEd (p. 194)
- Career and Technical Education MEd (p. 197)
- Counseling Psychology MEd (p. 198)
- Counseling Psychology PhD (p. 200)
- Early Childhood Education MEd (p. 200)
- Early Childhood Education and Special Education MEd (p. 201)
- Education/Applied Linguistics PhD (p. 203)
- Education/Educational Psychology PhD (p. 205)
- Education/Literacy and Learners PhD (p. 207)
- Education/Science, Mathematics and Educational Technology PhD (p. 209)
- Education/Special Education PhD (p. 211)
- Educational Leadership MEd (p. 213)
- Educational Leadership EdD (p. 214)
- Educational Leadership and Policy MEd (p. 218)
- Higher Education MEd (p. 219)
- Higher Education EdD (p. 221)
- Middle Grades Education/Language Arts MEd (p. 223)
- Middle Grades Education/Mathematics MEd (p. 225)
- Middle Grades Education/Mathematics and Language Arts MEd (p. 227)
- Middle Grades Education/Mathematics and Science MEd (p. 229)
- Middle Grades Education/Science MEd (p. 231)
- Middle Grades Education/Science and Language Arts MEd (p. 233)
- Middle Grades Education/Social Studies MEd (p. 235)
- Middle Grades Education/Social Studies and Language Arts MEd (p. 237)
- Middle Grades Education/Social Studies and Mathematics MEd (p. 239)
- Middle Grades Education/Social Studies and Science MEd (p. 241)
- Policy and Organizational Studies PhD (p. 243)
- Professional Health Education MEd (p. 245)
- School Psychology MEd (p. 247)
- School Psychology EdS (p. 248)
- School Psychology PhD (p. 249)

- Secondary Education/English Education MEd (p. 252)
- Secondary Education/Mathematics Education MEd (p. 254)
- Secondary Education/Science Education MEd (p. 256)
- Secondary Education/Social Studies Education MEd (p. 258)
- Secondary Education / World/Foreign Languages Education MEd (p. 259)
- Special Education MEd (p. 261)
- Teaching English to Speakers of Other Languages (TESOL) MSEd (p. 264)
- Graduate Certificate: Applied Behavior Analysis (p. 265)
- Graduate Certificate: Autism Endorsement (p. 267)
- Graduate Certificate: College Access and Success (p. 268)
- Graduate Certificate: Conflict Process (p. 269)
- Graduate Certificate: Data-Driven Decision Making (p. 270)
- Graduate Certificate: Disability Studies (p. 271)
- Graduate Certificate: Diversity Leadership in Higher Education (p. 272)
- Graduate Certificate: English as a Second Language (p. 273)
- Graduate Certificate: English Language Teaching (p. 274)
- Graduate Certificate: Institutional Effectiveness (p. 275)
- Graduate Certificate: Instructional Learning Technology (p. 276)
- Graduate Certificate: Leadership in Instructional Technology for Higher Education (p. 278)
- Graduate Certificate: Professional Health Education (p. 279)
- Graduate Certificate: Student Affairs Leadership (p. 280)
- Graduate Certificate: Superintendency (p. 281)
- Graduate Certificate: Teaching in Higher Education (p. 281)
- Graduate Certificate: Teaching in Higher Education for the Creative Disciplines (p. 282)
- Graduate Certificate: Urban Education (p. 283)

## Certificates Not Currently Open for Enrollment

- Career and Technical Education/K-12
- English Education/7-12
- Instructional Coaching Endorsement
- Mathematics Education/7-12
- Middle Grades Education/4-8
- Science Education/7-12
- Social Studies Education/7-12
- World/Foreign Languages Education/K-12

## Graduate Faculty

*Gregory Anderson*, Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, City University of New York.

*Janelle M. Bailey*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Arizona.

*Julie L. Booth*, Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, Carnegie Mellon University.

*Joseph Boyle*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Kansas.

*Carol B. Brandt*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of New Mexico.

*Wanda M. Brooks*, Professor, Department of Teaching and Learning, College of Education and Human Development; EdD, University of Pennsylvania.

*James P. Byrnes*, Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, Temple University.

*Sarah A. Cordes*, Associate Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, New York University.

*Maia Bloomfield Cucchiara*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Pennsylvania.

*James Earl Davis*, Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, Cornell University.

*Meixia Ding*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, Texas A and M University.

*Arthur G. Dowdy*, Assistant Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, Temple University.

*Joseph P. DuCette*, Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, Cornell University.

*Richard M. Englert*, Professor and Chancellor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; EdD, University of California Los Angeles.

*Armando X. Estrada*, Associate Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, University of Texas at El Paso.

*Frank H. Farley*, Professor Emeritus, Department of Psychological Studies in Education, College of Education and Human Development; PhD, University of London.

*Catherine A. Fiorello*, Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, University of Kentucky.

*Timothy P. Fukawa-Connelly*, Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Maryland.

*Allison Gilmour*, Assistant Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, Vanderbilt University.

*John Hall*, Assistant Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, University of California Berkeley.

*Annemarie H. Hindman*, Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Michigan.

*Xu (Lilya) Jiang*, Assistant Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, University of South Carolina.

*Jennifer Johnson*, Assistant Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, University of Maryland College Park.

*Paul Jones*, Assistant Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, Temple University.

*Avshalom Kaplan*, Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, University of Michigan.

*Janice H. Laurence*, Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, George Mason University.

*Kelly M. McGinn*, Assistant Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, Temple University.

*Sabina Neugebauer*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; EdD, Harvard University.

*Kristie Jones Newton*, Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Maryland College Park.

*Timothy J. Patterson*, Assistant Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, Columbia University, Teachers College.

*Laura Pendergast*, Associate Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, The Pennsylvania State University.

*Charles Price*, Associate Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, Graduate Center, City University of New York.

*Jayminn S. Sanford-DeShields*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; EdD, Harvard University.

*W. Joel Schneider*, Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, Texas A and M University.

*Michael W. Smith*, Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Chicago.

*Matthew J. Tincani*, Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, The Ohio State University.

*Renee M. Tobin*, Professor, Department of Psychological Studies in Education, College of Education and Human Development; PhD, Texas A and M University.

*Jason C. Travers*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; PhD, University of Nevada, Las Vegas.

*Matthew J. Elvis Wagner*, Associate Professor, Department of Teaching and Learning, College of Education and Human Development; EdD, Columbia University, Teachers College.

*Barbara A. Wasik*, Professor and the PNC Chair in Early Childhood Education, Department of Teaching and Learning, College of Education and Human Development; PhD, Temple University.

*Jason Wingard*, Professor, Department of Policy, Organizational and Leadership Studies, College of Education and Human Development; PhD, University of Pennsylvania.

*Christine A. Woysner*, Professor, Department of Teaching and Learning, College of Education and Human Development; EdD, Harvard University.

## Accomplished Teaching MEd

### COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Science in Education in Accomplished Teaching.

### About the Program

The Master of Science in Education program in Accomplished Teaching enables working teachers, both relatively new practitioners and veterans, to develop new knowledge and to reflect on and analyze their own practices in order to move their teaching to a higher level. A combination of core courses and electives supports and advances those who have chosen to make classroom teaching their profession while allowing them to explore individual interests and additional certifications. Courses are designed to meet the immediate needs of students and to be directly applicable to students' home schools and communities.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main, with some courses offered online

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 5:30 p.m. and online. The degree program can be completed on a full- or part-time basis.

**Job Prospects:** Graduates are typically educators in current positions of teaching and leadership. This program is designed to enhance credentials and expand educators' knowledge and expertise.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study before being admitted to the program. The credits transfer into the program, if the student is

admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2, with a third submitted at the applicant's discretion. Applicants are encouraged to use the online system in the application portal to request references electronically or they may use the "Reference Report for Graduate Study" found at [https://grad.temple.edu/sites/grad/files/Web\\_GRAD\\_REFERENCE\\_REPORT.PDF](https://grad.temple.edu/sites/grad/files/Web_GRAD_REFERENCE_REPORT.PDF).

From Whom: Letters of recommendation should be obtained from school administrators or college/university faculty members who can provide insight into the applicant's academic competence.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University. Official undergraduate and graduate transcripts from all accredited institutions attended are required, as well as a copy of a valid teaching certification or demonstration of at least two years of successful practice in an educational setting.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. Applicants who do not meet the minimum GPA requirement of 3.0 on a 4.0 scale may be considered for admission if they meet one of the following exceptions:

- Standard exception:** 3.5 UGPA during the last two years AND a minimum of 3.25 Graduate GPA for 9 credits (typically taken as a non-matriculated student in the program prior to application for admission).
- Special exception:** Applicants who do not meet regular admission criteria may be considered for a special exception if a compelling case can be made for admission on the basis of some additional source of data.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5255	Tech in Classrooms: TPCK <sup>1</sup>	3
EPSY 5529	Tests and Measurements <sup>2</sup>	3
	or EDUC 5101 Critical Understanding of Social Science Research	
	Select one course on diversity in the school system from the following: <sup>3</sup>	3
AOD 5524	Sociocultural Dynamics	
DSST 5402	Action Modes of Research	
DSST 5403	Disability and Social Policy	
TESL 5621	Contexts for Teaching and Learning Language	
URBE 5401	Policy and Practice in Urban Education	
URBE 5501	Urban Schools	
URBE 5565	The Origins of Urban Education	
	Select one course on individual differences from the following: <sup>4</sup>	3
DSST 5401	Disability Rights and Culture	
SPED 5211	Effective Instruction for Students with Disabilities	
TESL 5613	Multilingual Students' Literacy Development	
TESL 5615	Teaching English in a Global Context	
	<b>Electives <sup>5</sup></b>	<b>15</b>
<b>Capstone Course</b>		
EDAD 5201	Action and Collaborative Research Seminar	3
	or EDUC 9991 Research Apprenticeship	
<b>Total Credit Hours</b>		<b>30</b>

1

With documented approval from the student's advisor, another educational technology course may be selected.

2

With documented approval from the student's advisor, another research methods course may be selected.

3

With documented approval from the student's advisor, another course focused on diversity in the school system may be selected.

4

With documented approval from the student's advisor, another course focusing on individual differences may be selected.

5

Students select five courses from within or outside of the College of Education and Human Development (CEHD) to tailor the degree to their needs and interests. It is recommended that students in this program use their electives to pursue a graduate certificate, including Data-Driven Decision Making, Disability Studies, English as a Second Language, Instructional Learning Technology (p. 276), and Urban Education from CEHD or Computer Science Instruction from the College of Science and Technology. Some of these suggested certificates offer fewer than the required 15 credits of elective coursework for the Accomplished Teaching MEd program. Additional courses needed to complete 15 elective credits should be selected with documented approval from the student's advisor.

#### **Culminating Event:**

##### *Capstone Course:*

Students execute an action-research project as part of EDAD 5201 OR EDUC 9991.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/accomplished-teaching-msed-ed-atc-msed>

### **Department Information:**

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### **Submission Address for Application Materials:**

<https://apply.temple.edu/CEHD>

### **Department Contacts:**

#### *Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### *Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### *Program Coordinator:*

Dr. Tim Fukawa-Connelly  
[tim.fc@temple.edu](mailto:tim.fc@temple.edu)

#### *Teaching and Learning Department Chair:*

Dr. Kristie Newton  
[KJNewton@temple.edu](mailto:KJNewton@temple.edu)

# **Advocacy and Organizational Development MEd**

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Advocacy and Organizational Development.

## **About the Program**

The interdisciplinary MEd program in Advocacy and Organizational Development is led by faculty trained in anthropology, education, law, psychology, sociology and other fields. Coursework is based in social science, conflict theory, and quantitative and qualitative research that develops students' skills in:

- diagnosing issues in organizations and communities;
- developing interventions;
- promoting community or organizational well-being;
- managing conflict and conducting negotiation or mediation;
- preparing schools, communities and organizations to advocate on their own behalf;
- building diverse and inclusive relationships and teams; and
- conducting research for an organization or community.

The goal of the program is to develop civic-minded individuals who support organizations, communities and nonprofit organizations through community engagement; informed research; organizational dynamics; and theory and skills, including rigorous study of advocacy. Classroom instruction and assignments draw on students' experience along with training in conceptual, theoretical and methodological applications.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program has a strong interdisciplinary focus. In addition, the coursework concentrates on empowering and engaging all individuals in and out of formalized organizations, whether for-profit or nonprofit.

**Areas of Specialization:** The program features coursework in three areas:

- adult learning and training, which concentrates on developing and teaching instructional/training programs for adult personal and professional development;
- organizational and team development, which develops assessment, planning, facilitation and consulting skills to help teams and organizations design and implement change; and
- conflict management and dispute resolution, which involves developing models and best practices for positive conflict cultures and third-party interventions.

**Job Prospects:** The MEd degree in Advocacy and Organizational Development prepares students for applied positions focusing on advocacy, engagement and development within educational, community and organizational settings.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants must also submit an official document, including a course-by-course evaluation conducted by a NACES-accredited organization, that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 36

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
AOD 5301	People-Centered Community Development	3
AOD 5302	Introduction to Mission-Driven Organizations: Theory and Practice	3
AOD 5402	Negotiating Conflict	3
AOD 5404	Organizational Development	3
AOD 5524	Sociocultural Dynamics	3
AOD 5527	Training Design and Delivery	3
EDAD 5201	Action and Collaborative Research Seminar	3
EPSY 5551	Introduction to Program Evaluation	3
URBE 5417	The Urban Environment	3
<b>Electives <sup>1</sup></b>		<b>9</b>
<b>Total Credit Hours</b>		<b>36</b>

1

In consultation with their academic advisor, students select three approved College of Education and Human Development courses at the 5000 level or higher as electives. Suggested electives include AOD 5516, EDAD 5303, EDUC 5262 and URBE 5516.

**Culminating Event:** Successful completion of coursework is required to earn the Advocacy and Organizational Development MEd degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/advocacy-and-organizational-development-med-ed-avod-med>

### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*  
Dr. Armando Estrada  
armando.x.estrada@temple.edu

*Policy, Organizational and Leadership Studies Department Chair:*  
Dr. Christopher W. McGinley

Professor of Practice in Educational Leadership  
christopher.mcginley@temple.edu

## Applied Behavior Analysis MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Science in Education in Applied Behavior Analysis.

### About the Program

The Master of Science in Education program in Applied Behavior Analysis trains students to apply the principles of learning and behavior to influence behavior change that is significant to society. Students learn how to systematically change behavior by analyzing related environmental variables and applying interventions based on the principles of behavior science. Behavior analysts have improved a wide range of everyday issues, including enhancing staff performance, improving public safety initiatives, teaching effective parenting skills, treating problem behavior in children, improving general and special education teaching strategies, rehabilitating individuals who abuse substances, and more. This program fulfills the degree and coursework requirements and partially fulfills the supervised experience requirement for the Board Certified Behavior Analyst® (BCBA®) credential.

Graduates of the Applied Behavior Analysis MEd program help fill the growing demand for individuals with applied behavior analytic training in social service agencies and educational institutions, particularly in service of individuals with autism and other intellectual and developmental disabilities. The Applied Behavior Analysis graduate degree also prepares educators, clinicians and other helping professionals to understand and implement interventions to address skill deficits and performance issues or problem behavior. Graduates of the program have a diverse set of skills, including the ability to analyze environmental variables affecting behavior, create individualized interventions, and assess the effectiveness of interventions to inform data-based decisions on modification and continuation.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main, with some courses offered at off-site locations

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The interdisciplinary Applied Behavior Analysis MEd program blends courses in education and psychology. Courses are taught by faculty with top academic credentials and experience as practitioners.

**Accreditation:** The Association for Behavior Analysis International® (ABAI) has verified the seven-course sequence of this MEd's requirements for eligibility to take the Board Certified Behavior Analyst® or Board Certified Assistant Behavior Analyst® examination. Applicants need to, however, meet additional requirements before they can be deemed eligible to take the examination.

**Job Prospects:** Graduates are prepared for professional careers in a variety of environments, particularly in social service agencies and educational institutions.

**Licensure/Certification:** Coursework may apply toward earning the Behavior Specialist license from the Commonwealth of Pennsylvania.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

#### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Interview:** An interview with the faculty admissions committee may be required after a complete application is received.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.



**Credits Earned in a Certificate Program:** Students who choose to enroll in the MSEd program may have up to 12 credits earned for either the Applied Behavior Analysis Graduate Certificate or Autism Endorsement Graduate Certificate applied to the MSEd upon acceptance into the program. Completion of a certificate program does not guarantee admission into the master's program, and students who are accepted may have to complete more than 33 credits to meet all requirements for the master's program. Students currently enrolled in a certificate program and considering matriculation into a master's program are encouraged to apply as early as possible.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 36

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
ABA 5302	Effective Teaching Strategies and Academic Interventions	3
ABA 5303	Ethical and Legal Issues	3
ABA 5304	Concepts and Principles of Behavior Analysis	3
ABA 5305	Single Subject Research Design	3
ABA 5306	Organizational Behavior Management - OBM	3
or PSY 8610	Topical Seminar in Organizational-Social	
ABA 5307	Experimental Analysis of Behavior - EAB	3
ABA 5676	Applied Behavior Analysis	3
ABA 8787	Seminar on Verbal Behavior	3
<b>Practica</b>		
ABA 9387	Practicum in Applied Behavior Analysis <sup>1</sup>	6
<b>Culminating Project</b>		
ABA 9991	Applied Research Experience <sup>2</sup>	6
<b>Total Credit Hours</b>		<b>36</b>

<sup>1</sup> Students are required to take two 150-hour practica for 3 credits each: ABA 9387 Practicum in Applied Behavior Analysis. Acceptable practicum sites are those engaged in applied behavior analysis practice/research with the ability to provide ongoing supervision to students in the discipline. A list of approved sites is available, although other sites can be approved by the program.

<sup>2</sup> ABA 9991 Applied Research Experience (3 s.h.) is taken twice for credit.

### Culminating Event:

*Applied Research Experience:*

Students are required to select a research project and participate in supervised research activities through ABA 9991. They develop a research question and then may conduct a literature review, develop and/or follow a research protocol, collect and analyze data, and/or report research results as part of their research experience.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/applied-behavior-analysis-msed-ed-aba-msed>

### Department Information:

Dept. of Teaching and Learning  
 College of Education and Human Development  
 1301 Cecil B. Moore Avenue  
 Philadelphia, PA 19122-6091  
 edaba@temple.edu  
 215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
 Office of Enrollment Management  
 educate@temple.edu  
 215-204-0999

*Graduate Advising:*  
 College of Education and Human Development  
 gradcehd@temple.edu

*Program Coordinator:*  
 Dr. Jason Travers  
 jason.travers@temple.edu

*Teaching and Learning Department Chair:*  
 Dr. Kristie Newton  
 KJNewton@temple.edu

## Applied Research and Evaluation PSM

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Professional Science Master's in Applied Research and Evaluation.

### About the Program

Growing awareness of the importance of data-informed planning and decision-making, increased availability and ease of collection of data, and rising emphasis on accountability in a wide array of educational and organizational settings have served to increase demand for personnel with applied research knowledge, skills and abilities across educational, nonprofit, for-profit and governmental organizations. The Professional Science Master's degree in Applied Research and Evaluation offers a graduate curriculum that enables students to study advanced conceptual and theoretical principles and methodological and statistical procedures while simultaneously developing expertise and experience with applied research and program evaluation studies in educational and organizational settings.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time students complete the degree program by taking classes during the day and in the evening. Part-time students take classes that start after 4:00 p.m.

**Areas of Specialization:** The program offers two areas of concentration:

- Applied Educational Psychology focuses on the development of research and evaluation skills for PreK-16 educational settings.
- Organizational Research and Development focuses on the development of research and evaluation skills for use in nonprofit, for-profit and governmental institutions.

**Job Prospects:** The PSM degree in Applied Research and Evaluation is designed to prepare students for applied positions focusing on research and development within educational and organizational settings. Academic settings may include research centers, institution evaluation units, and research and planning units within institutions of higher learning. Other organizational settings may include applied research and development units within the public and private sectors, as well as units within nonprofit and for-profit entities.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

**Application Deadline:**

Fall: March 1  
Spring: November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

Number Required: 2

**From Whom:** Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking the Professional Science Master's degree with a specific focus

on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5262	Introduction to Qualitative Research	3
EDUC 8401	Philosophical Foundations of Educational Research	3
	or EDUC 8403 Understanding Social Science	
EDUC 8404	Quantitative Analysis, Part I	3
EPSY 8627	Introduction to Research Design and Methods	3
<b>Advanced Methods Course <sup>1</sup></b>		<b>3</b>
Select one from the following:		
EDUC 5244	Class Discourse	
EDUC 8102	Ethnographic Research Methods	
EDUC 8405	Quantitative Analysis, Part II	
EPSY 8825	Advanced Data Analysis <sup>2</sup>	
<b>Concentration Courses <sup>3</sup></b>		<b>9</b>
<b>Culminating Courses <sup>4</sup></b>		<b>6</b>
EDUC 9185	Applied Research and Evaluation Internship	
EDUC 9991	Research Apprenticeship	
<b>Total Credit Hours</b>		<b>30</b>

1

Students may select an alternate advanced methods course with approval from the program advisor.

2

EPSY 8825 Advanced Data Analysis requires completion of EDUC 8405 Quantitative Analysis, Part II.

3

Three courses are taken. The approved courses are delineated in the concentration grids below.

4

Over two academic terms, 6 credits of EDUC 9185 and/or EDUC 9991 are taken in any of the following iterations: 6 credits of EDUC 9185, 6 credits of EDUC 9991, or 3 credits of EDUC 9185 and 3 credits of EDUC 9991.

### PSM with No Concentration

Code	Title	Credit Hours
Select three	College of Education courses at the 5000 level or higher	9
<b>Total Credit Hours</b>		<b>9</b>

1

Students select their courses in consultation with their academic advisor.

### OR PSM with Optional Concentration in Applied Educational Psychology

Code	Title	Credit Hours
EDUC 8501	Motivation in Education	3
EPSY 5551	Introduction to Program Evaluation	3
or AOD 5535	Organizational Assessment, Design and Strategy	
EPSY 5561	Development and Learning Over the Lifespan	3
<b>Total Credit Hours</b>		<b>9</b>

### OR PSM with Optional Concentration in Organizational Research and Development

Code	Title	Credit Hours
AOD 5404	Organizational Development	3
Select two from the following:		6
AOD 5524	Sociocultural Dynamics	
AOD 5535	Organizational Assessment, Design and Strategy	
EPSY 5529	Tests and Measurements	
EPSY 5551	Introduction to Program Evaluation	
<b>Total Credit Hours</b>		<b>9</b>

**Culminating Event:** Students complete coursework to earn the degree, including internship and/or apprenticeship credits taken across two academic terms. Students elect to take:

- EDUC 9185 Applied Research and Evaluation Internship, which allows for engagement in a supervised work experience in an applied research and evaluation capacity in schools, business or government; and/or
- EDUC 9991 Research Apprenticeship, which actively engages the student in faculty-mentored research and production of a scholarly product such as a submission to an academic conference, an article or chapter, or a grant proposal.

### Contacts

#### Program Web Address:

<https://www.temple.edu/academics/degree-programs/applied-research-and-evaluation-psm-ed-arev-psm>

### Department Information:

Dept. of Psychological Studies in Education  
 College of Education and Human Development  
 1301 Cecil B. Moore Avenue  
 Philadelphia, PA 19122-6091  
 educate@temple.edu  
 215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
 Office of Enrollment Management  
 educate@temple.edu  
 215-204-0999

*Graduate Advising:*  
 College of Education and Human Development  
 gradcehd@temple.edu

*Program Coordinator:*  
 Dr. Joseph Ducette  
 joseph.ducette@temple.edu

*Psychological Studies in Education Department Chair:*  
 Dr. Shanta Hattikudur  
 shanta@temple.edu

## Career and Technical Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Career and Technical Education.

### About the Program

The mission of the Career and Technical Education master's program is to prepare its students to share their professional expertise in a classroom by gaining credentials to teach in Pennsylvania's public K–12 schools. Students study child and adolescent development, teaching models and inclusive school practices. They also learn to adapt curriculum for students of varying backgrounds, levels of knowledge and language use. Two optional concentrations are offered.

The program with no concentration is designed to enable students to become effective teachers in Career and Technical Education areas in grades 7 to 12. This program provides competencies for diverse types of teaching environments and offers transitional skill attainment strategies for application of knowledge across an array of career and technical program areas. Individuals completing the program find success in secondary teaching, post-secondary teaching in community colleges, and developing industrial training programs for businesses.

The concentration in Business, Computer and Information Technology is designed to enable students to become effective teachers in all of the business domains, including business communications; computer and information technology; economics and personal finance; law,

entrepreneurship, and international business; management and marketing concepts; and quantitative skills and accounting. Individuals are prepared for success in K-12 teaching, post-secondary teaching in community colleges, and business skills training.

The concentration in Marketing Education is designed to enable students to become effective marketing teachers. This program provides competencies for diverse types of work in marketing and offers transitional skill attainment strategies for application of knowledge across an array of business areas. Individuals are prepared for success in K-12 teaching, post-secondary teaching in community colleges, developing marketing education programs for businesses, and as trainers in marketing for a variety of business types and sizes.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main and Online, with coursework offered in a hybrid format of some in-person instruction but mostly online instruction

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. and/or online. The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** The program offers two optional concentrations for study:

- Business, Computer and Information Technology
- Marketing Education

**Job Prospects:** Graduates typically continue in their established career paths as career and technical educators, work-force development professionals, and technical trainers in business and industry.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all required licensure examinations, candidates may apply for a Pennsylvania Career and Technical Instructional certification (MEd with no concentration) or a Pennsylvania Instructional I Teaching Certificate (MEd with the optional concentration in Business, Computer and Information Technology or in Marketing Education).

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Prerequisites for admission to the Career and Technical Education MEd program include courses taken at the undergraduate level with a grade of "C" or better earned in the following areas:

- At least 6 credits of college-level mathematics, and
- At least 6 credits of college-level English composition and literature.

A prerequisite evaluation is conducted upon receipt of the application and all official transcripts. All required prerequisites must be fulfilled before an applicant is eligible for admission.

For the Business, Computer and Information Technology or Marketing Education concentrations, your transcript should show coursework in each of the following areas:

- Business communications
- Computer and information technology
- Economics and personal finance
- Law, entrepreneurship and international business
- Management and marketing concepts
- Quantitative skills and accounting

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

For the MEd with no concentration, applicants must show proof of Intern Certification (8,000 hours of paid work experience and OCA completion).

For the MEd with an optional concentration in Business, Computer and Information Technology or in Marketing Education, applicants must provide an official score report that demonstrates a passing score on the *Praxis*® Fundamental Subjects: Content Knowledge (5511) test. Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis*® Subject Assessment in their intended concentration area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis*® Business Education: Content Knowledge (5101) for the Business, Computer and Information Technology concentration – 154 minimum score
- *Praxis*® Marketing Education (5561) for the Marketing Education concentration – 144 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master’s degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Coursework Waivers:** Each student is assigned a faculty advisor at the time of admission. The advisor reviews the student’s credentials and determines which, if any, of the required courses can be waived. In general, this waiver covers the beginning-level courses in the program. Waiving a specific requirement, however, does not reduce the total number of credits needed to graduate.

**Clearances:** A Pennsylvania criminal background check, a federal criminal history check, a child abuse clearance, and a TB test are required upon enrollment.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 33*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CTE 5605	Models of Teaching	3
EDUC 5255	Tech in Classrooms: TPCK	3
EDUC 5402	Child and Adol Develop	3
MGSE 5796	Literacy and Differentiation in the Academic Areas, 7-12	3
SPED 5666	Introduction to Special Education	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Concentration Courses <sup>1</sup></b>		<b>9</b>
<b>Culminating Courses</b>		
EDUC 5409	Research Methods and Induction Capstone	3
EDUC 5888	Supervised Teaching	3
<b>Total Credit Hours</b>		<b>33</b>

1

Three courses are taken. The approved courses are delineated in the grids below:

## MEd with No Concentration

Code	Title	Credit Hours
CTE 5425	Advanced Concepts and Practices in Career and Technical Education	3
CTE 5431	Concepts in Career and Technical Education Programs	3
SPED 5109	Classroom Management and Positive Behavior Support	3
<b>Total Credit Hours</b>		<b>9</b>

## OR MEd with Optional Concentration in Business, Computer and Information Technology

### OR with Optional Concentration in Marketing Education

Code	Title	Credit Hours
BSED 5241	Methods of Teaching Business, Computer, and Information Technology and Marketing Education	3
BSED 5251	Current Trends & Developments in Business, Computer and Information Technology & Marketing Education	3
CTE 5669	Project-Based Learning	3
<b>Total Credit Hours</b>		<b>9</b>

**Culminating Events:** Student teaching and its related seminar constitute the culminating events for the MEd in Career and Technical Education program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/career-and-technical-education-med-ed-cte-med>

### Department Information:

Dept. of Teaching and Learning  
 College of Education and Human Development  
 1301 Cecil B. Moore Avenue  
 Philadelphia, PA 19122-6091  
 educate@temple.edu  
 215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

**Admissions:**  
 Office of Enrollment Management  
 educate@temple.edu  
 215-204-0999

**Graduate Advising:**  
 College of Education and Human Development

gradcehd@temple.edu

*Program Coordinator:*  
Dr. Elizabeth Diamond  
ediamond@temple.edu

*Teaching and Learning Department Chair:*  
Dr. Kristie Newton  
KJNewton@temple.edu

## Career and Technical Education MSEd

### COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Science in Education in Career and Technical Education.

### About the Program

The mission of the Master of Science in Education program in Career and Technical Education is to enable its students to apply advanced pedagogical skills, knowledge and attributes in a career and technical education setting at the secondary and post-secondary levels. Individuals pursuing this degree already hold instructional or career and technical certification in Pennsylvania. While pursuing this online degree, individuals pursue Pennsylvania certification in supervision of career and technical education and director of career and technical education. The degree provides specialized knowledge in areas of workforce development, leadership, industry trends and issues, the role of workforce development in a dynamic economy, and infusing industry standards into secondary career and technical education programs.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** Students complete the degree program online on a full- or part-time basis.

**Job Prospects:** Graduates are prepared for leadership roles as teachers, adult instructors, curriculum specialists, career and technical center administrators, and technical trainers in business and industry.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

#### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

#### Other Requirements:

1. Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.
2. Be an effective content teacher at the pre-kindergarten through fourth grade, fourth through eighth grade, or secondary level.
3. Hold an Instructional I or II teaching certificate.

### Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
CTE 5423	Leadership in Career and Technical Education	3
CTE 8501	Curriculum Development for Programs of Study in Career and Technical Education	3
CTE 8507	The Role of Career and Technical Education in Workforce and Economic Development	3
CTE 8521	Collaborative Processes for Effective Career and Technical Education Programs	3

CTE 8527	Program Planning, Evaluation, and Systems Alignment in Career and Technical Education	3
CTE 8528	Creating a Culture of Teaching and Learning in Career and Technical Education Programs	3
CTE 8589	Managing Resources and Data Driven Decision Making in Career and Technical Education	3
EDAD 5302	Contexts for Sch Reform	3
EDAD 5303	Ldshp in Diverse Context	3
	or EDAD 5304 Sch Operations, Mgmt, Tech	
<b>Practicum</b>		
CTE 9885	Internship in Career and Technical Education	3
<b>Total Credit Hours</b>		<b>30</b>

**Culminating Event:***Practicum:*

Students must complete CTE 9885 Internship in Career and Technical Education to satisfy the practicum requirement.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/career-and-technical-education-msed-ed-cte-msed>

**Department Information:**

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

**Submission Address for Application Materials:**

<https://apply.temple.edu/CEHD>

**Department Contacts:***Admissions:*

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*

College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*

Dr. Elizabeth Diamond  
ediamond@temple.edu

*Teaching and Learning Department Chair:*

Dr. Kristie Newton  
KJNewton@temple.edu

**Counseling Psychology MEd**

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Counseling Psychology.

**About the Program**

The Counseling Psychology program offers a 60-credit master's degree in Education (MEd) with two areas of concentration:

- Mental Health Counseling prepares students to work with individuals, couples, families and groups in various settings, including community mental health centers, hospitals and consulting agencies. Completion of the Counseling Psychology master's degree with a concentration in Mental Health Counseling qualifies the student to become a Licensed Professional Counselor (LPC) in the Commonwealth of Pennsylvania.
- School Counseling prepares students to work with students, teachers, administrators and parents in either an elementary or secondary school setting. Completion of the Counseling Psychology master's degree with a concentration in School Counseling qualifies the student for certification as a Pre-K-12 school counselor in the Commonwealth of Pennsylvania.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The program is designed to be completed in two years of full-time study or three years of part-time study.

**Areas of Specialization:** The program offers concentrations in Mental Health Counseling and School Counseling.

**Job Prospects:** Graduates typically engage in careers as licensed professional counselors or school counselors, or use their degree to pursue doctoral training in a field related to Counseling Psychology.

**Licensure/Certification:** Upon successful completion of the Mental Health Counseling Concentration degree requirements, passing the required post-master's licensure examination, and completing the Supervised Clinical Experience, candidates may apply to become a Pennsylvania Licensed Professional Counselor (LPC). For more information about licensure in Pennsylvania, see the Pennsylvania Department of State's professional licensing guidelines. Other states may require additional testing, clinical experience and/or coursework.

Upon successful completion of the School Counseling Concentration degree requirements and passing the *Praxis*® School Counselor (5422) examination, candidates may apply for a Pennsylvania Educational Specialist certificate as Elementary and Secondary School Counselor PK-12. A GPA of 3.0 or higher is required in most states to become certified. For more information about certification in Pennsylvania, see the Pennsylvania Department of Education's certification guidelines. Other states may require additional testing and/or coursework, and some states certify without the *Praxis*® examination.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: February 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support. The faculty admissions committee reviews application materials to evaluate evidence of:

- Work experience and/or volunteer public service relevant to professional development in counseling psychology;
- Intra- and inter-personal skills (or potential for the development of such skills) as indicated in the applicant's personal and career statements; and
- Aptitude for graduate-level academic work as determined by graduate and undergraduate grades, especially work in the major and in prerequisite psychology courses.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, describe your interest in seeking a Counseling Psychology MEd, focusing on the career to which you aspire, such as mental health counselor or school counselor; your interests; and your relevant academic and professional experience. Explicitly indicate whether you are applying to the Mental Health Counseling or School Counseling concentration.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Interview:** An interview with the faculty admissions committee may be required after a complete application is received.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 60

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
CPSY 5492	Theories of Counseling Psychology	3
CPSY 5519	Group Counseling	3
CPSY 5526	Multicultural Counseling	3
CPSY 5564	Addiction, Counseling, and Biological Bases of Behavior	3
CPSY 5579	Introduction to Couples and Family Counseling	3
CPSY 5591	Legal and Ethical Issues in Counseling Psychology	3
CPSY 5593	Career Counseling and Development	3
CPSY 5694	Introduction to Assessment	3
CPSY 5698	Fundamental Counseling Techniques	3
CPSY 5699	Crisis Prevention, Intervention, and Consultation	3
CPSY 9085	Advanced Counseling Techniques (2 terms)	6
CPSY 9185	Master's Internship in Counseling Psychology (2 terms)	6
CPSY 9387	Practicum in Counseling Psychology I & II	3
EDUC 5325	Introduction to Statistics and Research	3
EPSY 5561	Development and Learning Over the Lifespan	3
<b>Concentration Courses</b>		<b>9</b>
Select the courses identified for the chosen concentration:		
Mental Health Counseling		
CPSY 5566	Professional Issues in Mental Health Counseling	
CPSY 5691	Diagnosis in Counseling Psychology	
Elective		
School Counseling		
CPSY 5511	Counseling in the Schools	
CPSY 5565	Educational Specialists Coordinating Community Resources for Diverse Learners	
Elective		
<b>Total Credit Hours</b>		<b>60</b>

### Culminating Events:

*Comprehensive Examination:*

The comprehensive examination is designed to provide students with an opportunity to demonstrate their ability to integrate and apply both their didactic and practice-oriented academic experiences.

*Practicum:*

Students are required to complete a 100-hour practicum, with 40 direct client contact hours completed at a training site approved by the program. Students in the Mental Health Counseling concentration complete their training in a community mental health setting, while those in the School Counseling concentration complete their training in a school setting. Students receive individual on-site supervision and faculty supervision as a part of their training experience.

*Internship:*

Following the practicum, students are required to complete a 600-hour internship over two semesters, with 280 direct client contact hours



completed at a training site approved by the program. Students in the Mental Health Counseling concentration complete their training in a community mental health setting, while those in the School Counseling concentration complete their training in a school setting. Students continue to receive individual on-site supervision and faculty supervision as a part of their training experience.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/counseling-psychology-med-ed-cpsy-med>

### Department Information:

Dept. of Psychological Studies in Education  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### Admissions:

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### Graduate Advising:

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### Program Coordinator:

Dr. Cathy Fiorello  
[catherine.fiorello@temple.edu](mailto:catherine.fiorello@temple.edu)

#### Psychological Studies in Education Department Chair:

Dr. Shanta Hattikudur  
[shanta@temple.edu](mailto:shanta@temple.edu)

## Counseling Psychology PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Early Childhood Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Early Childhood Education.

## About the Program

The Early Childhood Education graduate program is designed to prepare students for initial teacher certification in Early Childhood Education, grades pre-Kindergarten to 4.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Evening classes on Main campus start at 5:30 p.m. Students also complete fieldwork in a classroom about one day a week throughout each academic term.

**Accreditation:** The program is approved as a teacher certification preparation program by the Pennsylvania Department of Education.

**Job Prospects:** Graduates typically pursue early childhood teaching positions in school settings in grades pre-Kindergarten to 4.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all required licensure examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Prerequisites for admission to the Early Childhood Education MEd program include at least one course (3 credits) taken at the undergraduate or graduate level with a grade of "C" or better earned in the following areas:

- Math (cannot be basic or remedial courses below the 1000 level)
- Science

A prerequisite evaluation is conducted upon receipt of the application and all official transcripts. All required prerequisites must be fulfilled before an applicant is eligible for admission.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** A Pennsylvania criminal background check, a federal criminal history check, a child abuse clearance, and a TB test are required upon enrollment.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 37*

*Required Courses:*

Code	Title	Credit Hours
<b>Foundation Course</b>		
EDUC 5402	Child and Adol Develop	3
<b>Early Childhood Education Courses</b>		
ECED 5107	Mathematics Education for the Early Years: PreK-4	3
ECED 5108	Social Studies Education for the Early Years: PreK-4	3
ECED 5109	Science Education for the Early Years: PreK to 4	3
ECED 5206	Literacy Foundations for the Primary Grades: First through Fourth	3

ECED 5502	Cognitive Development	3
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#### Special Education Courses

SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5211	Effective Instruction for Students with Disabilities	3
SPED 5666	Introduction to Special Education	3

#### TESOL Course

TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
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#### Culminating Courses

EDUC 5409	Research Methods and Induction Capstone	3
EDUC 5888	Supervised Teaching	4

**Total Credit Hours** **37**

**Culminating Events:** Supervised teaching and its related research methods and capstone course are the culminating events for the Early Childhood Education MEd program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/early-childhood-education-med-ed-eced-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*  
Dr. Judith Flanigan  
judith.flanigan@temple.edu

*Teaching and Learning Department Chair:*  
Dr. Kristie Newton  
KJNewton@temple.edu

## Early Childhood Education and Special Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Early Childhood Education and Special Education.

## About the Program

The Early Childhood Education and Special Education graduate program is designed to prepare students for dual teacher certification in Early Childhood Education and Special Education, grades pre-Kindergarten to 4.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Evening classes on Main campus start at 5:30 p.m. Students also complete fieldwork in a classroom about one day a week throughout each academic term.

**Accreditation:** The program is approved as a teacher certification preparation program by the Pennsylvania Department of Education.

**Job Prospects:** Graduates typically pursue early childhood and special education teaching positions in school settings in grades pre-Kindergarten to 4.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all required licensure examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated** courses before being admitted to the program are NOT guaranteed admission.

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Prerequisites for admission to the Early Childhood Education and Special Education MEd program include at least one course (3 credits) taken at the undergraduate or graduate level with a grade of "C" or better earned in the following areas:

- Math (cannot be basic or remedial courses below the 1000 level)
- Science

A prerequisite evaluation is conducted upon receipt of the application and all official transcripts. All required prerequisites must be fulfilled before an applicant is eligible for admission.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** A Pennsylvania criminal background check, a federal criminal history check, a child abuse clearance, and a TB test are required upon enrollment.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 49

*Required Courses:*

Code	Title	Credit Hours
<b>Foundation Course</b>		
EDUC 5402	Child and Adol Develop	3
<b>Early Childhood Education Courses</b>		
ECED 5107	Mathematics Education for the Early Years: PreK-4	3
ECED 5108	Social Studies Education for the Early Years: PreK-4	3
ECED 5109	Science Education for the Early Years: PreK to 4	3

ECED 5206	Literacy Foundations for the Primary Grades: First through Fourth	3
ECED 5502	Cognitive Development	3
<b>Special Education Courses</b>		
SPED 5105	Assessment in Special Education	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5201	Students with Moderate to Severe Disabilities: Effective Teaching Strategies	3
SPED 5211	Effective Instruction for Students with Disabilities	3
SPED 5402	Effective Transition Practices for Students with Disabilities	3
SPED 5666	Introduction to Special Education	3
<b>TESOL Course</b>		
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Culminating Courses</b>		
EDUC 5409	Research Methods and Induction Capstone	3
EDUC 5888	Supervised Teaching	4
<b>Total Credit Hours</b>		<b>49</b>

**Culminating Events:** Supervised teaching and its related research methods and capstone course are the culminating events for the Early Childhood Education and Special Education MEd program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/early-childhood-and-special-education-med-ed-edse-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*  
Dr. Judith Flanigan  
judith.flanigan@temple.edu

*Teaching and Learning Department Chair:*

Dr. Kristie Newton  
KJNewton@temple.edu

## Education/Applied Linguistics PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Philosophy in Education.

### About the Program

The interdisciplinary PhD program in Education, with a concentration in Applied Linguistics, prepares students to study ways in which languages – and, in particular, second or additional languages – are used, taught and learned in today’s increasingly globalized and multilingual world. The program promotes significant research on the teaching, learning and testing of additional languages, including but not limited to English, and on the interaction between language ideologies and practices in multilingual communities and societies. Students gain theoretical grounding, research experiences and academic skills that prepare them for academic research positions and other academic and practice-oriented positions.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students may matriculate either full- or part-time. Most courses are offered in the evening to accommodate working professionals. The length of time to complete the doctoral degree program varies depending on the number of courses taken each term.

**Job Prospects:** Graduates are prepared for academic research positions in the areas of Applied Linguistics, Second and Foreign Language Education, and TESOL, as well as for other academic and practice-oriented positions.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

**APPLY ONLINE to this graduate program.**

**Letters of Reference:**

Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** Students who hold a master's degree in a related field may transfer in up to 30 credits as advanced standing, with approval.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a 500- to 1,000-word statement in autobiographical style covering the following areas:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Education help you explore those interests?
- What academic/professional goals would the program help you to achieve following graduation?
- How does the doctoral program at Temple fit your individual interests, needs and future goals? Be certain to identify the faculty member whose research best matches your own interests.

**Standardized Test Scores:**

GRE: Not required, but scores from the general test taken no more than 5 years prior to application may be submitted.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Master's: 48*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5262	Introduction to Qualitative Research	3
EDUC 8401	Philosophical Foundations of Educational Research	3
EDUC 8404	Quantitative Analysis, Part I	3
EDUC 8405	Quantitative Analysis, Part II	3
EDUC 9987	Teaching Apprenticeship	3
EDUC 9991	Research Apprenticeship	3
EPSY 8627	Introduction to Research Design and Methods	3
	Advanced Methods Elective	3
<b>Applied Linguistics Concentration Courses</b>		
EDUC 8505	Assessment and Evaluation of Students	3
EDUC 8506	Cognition and Learning in Education	3
EDUC 9991	Research Apprenticeship	3
	Select three from the following:	9
TESL 5611	Applied Language Study I: Phonology and the Lexicon	
TESL 5613	Multilingual Students' Literacy Development	
TESL 8625	Applied Linguistics	
TESL 8626	Second Language Writing	
TESL 8635	Educating English Language Learners: State of Knowledge	
TESL 8636	Assessment of English Language Learners	
TESL 8643	Research Methods in Applied Linguistics	
TESL 8644	Current Issues in Applied Linguistics	
	<b>Culminating Courses</b> <sup>1</sup>	<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>48</b>

1

Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

**Internship:** An internship in the form of a research apprenticeship is required.

**Culminating Events:**

*Preliminary Examination:*

The purpose of the preliminary examination is for students to demonstrate their development in the three core areas of a faculty member's life: research, teaching and service. The exam requires students to undertake an integrative analysis of research; to demonstrate that they can bring research and theory into effective practice in their teaching; and to exhibit their ability to provide professional service. Preliminary exams are evaluated by a committee of faculty in the concentration. Evaluators look for a breadth and depth of understanding of research and theory; a critical application of that knowledge to specific phenomena and to teaching; integrative reasoning ability; and an ability to write technical prose.

*Proposal with Oral Defense:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem; an exhaustive survey and review of literature related to the problem;

and a detailed methodological plan for investigating the problem. The proposal should be completed and approved no more than one year after completing coursework.

The proposal is defended in an open hearing attended by the student's Doctoral Advisory Committee, which is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from, or affiliated with, Applied Linguistics. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress. Upon approval of the proposal by the Doctoral Advisory Committee, a timeline for completing the investigation and writing process is established.

#### *Dissertation with Oral Defense:*

The doctoral dissertation is an original study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least two additional faculty members, one of whom must be from outside the concentration. The Dissertation Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Shimada Resource Center at least 10 days before the defense is to be held. After the time, date and room for the defense have been established, the completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," is sent to the Graduate School. A flyer announcing the defense is posted in a public location in the College.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/education-phd-ed-educ-phd>

### Department Information:

Applied Linguistics PhD Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application

#### Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

#### *Admissions:*

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

#### *Graduate Advising:*

College of Education and Human Development  
gradcehd@temple.edu

#### *Program Coordinator:*

Dr. Elvis Wagner  
matthew.wagner@temple.edu

## Education/Educational Psychology PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Philosophy in Education.

### About the Program

The interdisciplinary PhD program in Education, with a concentration in Educational Psychology, seeks to advance the understanding of learning, cognition and human development as these processes apply to educational processes and practices. The Educational Psychology specialty is characterized by a strong theoretical and research orientation, the interplay of theory and practice, an interdisciplinary approach, and a commitment to service. Designed for students seeking to become professors or researchers in higher education, it is structured around the three areas of learning and conceptual processes, motivation, and applied data analysis and research methodology.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students may matriculate either full- or part-time. Most courses are offered in the evening to accommodate working professionals. The length of time to complete the doctoral degree program varies depending on the number of courses taken each term.

**Job Prospects:** Graduates typically pursue careers in higher education.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

#### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** Students who hold a master's degree in a related field may transfer in up to 30 credits as advanced standing, with approval.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a 500- to 1,000-word statement in autobiographical style covering the following areas:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Education help you explore those interests?
- What academic/professional goals would the program help you to achieve following graduation?
- How does the doctoral program at Temple fit your individual interests, needs and future goals? Be certain to identify the faculty member whose research best matches your own interests.

#### Standardized Test Scores:

GRE: Not required, but scores from the general test taken no more than 5 years prior to application may be submitted.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Master's: 48

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5262	Introduction to Qualitative Research	3
EDUC 8401	Philosophical Foundations of Educational Research	3
EDUC 8404	Quantitative Analysis, Part I	3
EDUC 8405	Quantitative Analysis, Part II	3
EDUC 9987	Teaching Apprenticeship	3
EDUC 9991	Research Apprenticeship	3
EPSY 8627	Introduction to Research Design and Methods	3
	Advanced Methods Elective	3
<b>Educational Psychology Concentration Courses</b>		
EDUC 8501	Motivation in Education	3
EDUC 8503	Learning to Read	3
EDUC 8504	Problem Solving and Reasoning in STEM Education	3
EDUC 8506	Cognition and Learning in Education	3
EDUC 9991	Research Apprenticeship	3
EPSY 8986	Proseminar in Educational Psychology	3
<b>Culminating Courses</b> <sup>1</sup>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>48</b>

1

Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

**Internship:** An internship in the form of a research apprenticeship is required.

### Culminating Events:

*Preliminary Examination:*

The purpose of the preliminary examination is for students to demonstrate their development in the three core areas of a faculty member's life: research, teaching and service. The exam requires students to undertake an integrative analysis of research; to demonstrate that they can bring research and theory into effective practice in their teaching; and to exhibit their ability to provide professional service. Preliminary exams are evaluated by a committee of faculty in the concentration. Evaluators look for a breadth and depth of understanding of research and theory; a critical application of that knowledge to specific phenomena and to teaching; integrative reasoning ability; and an ability to write technical prose.

*Proposal with Oral Defense:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem; an exhaustive survey and review of literature related to the problem; and a detailed methodological plan for investigating the problem. The

proposal should be completed and approved no more than one year after completing coursework.

The proposal is defended in an open hearing attended by the student's Doctoral Advisory Committee, which is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from, or affiliated with, Educational Psychology. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress. Upon approval of the proposal by the Doctoral Advisory Committee, a timeline for completing the investigation and writing process is established.

#### *Dissertation with Oral Defense:*

The doctoral dissertation is an original study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least two additional faculty members, one of whom must be from outside Educational Psychology. The Dissertation Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Shimada Resource Center at least 10 days before the defense is to be held. After the time, date and room for the defense have been established, the completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," is sent to the Graduate School. A flyer announcing the defense is posted in a public location in the College.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/education-phd-ed-educ-phd>

### Department Information:

Educational Psychology PhD Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

#### *Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### *Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.com](mailto:gradcehd@temple.com)

#### *Program Coordinator:*

Dr. Avi Kaplan  
[avi.kaplan@temple.edu](mailto:avi.kaplan@temple.edu)

## Education/Literacy and Learners PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Philosophy in Education.

### About the Program

The PhD concentration in Literacy and Learners prepares students to understand literacy research and practice and to contribute new knowledge to the field of literacy learning. The program defines literacy learning broadly. Students can focus on various aspects of language and literacy from their developmental foundations in childhood and early schooling to how older children, adolescents and adults learn and apply them in different contexts. The program is grounded on the beliefs that education is a primary mechanism for social justice and that educational research has the capacity to improve the material conditions of people's lives.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students may matriculate either full- or part-time. Most courses are offered in the evening to accommodate working professionals. The length of time to complete the doctoral degree program varies depending on the number of courses taken each term.

**Job Prospects:** The program is designed to prepare students for an academic or other research-oriented job.

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:* December 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**



Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** Students who hold a master's degree in a related field may transfer in up to 30 credits as advanced standing, with approval.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a 500- to 1,000-word statement in autobiographical style covering the following areas:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Education help you explore those interests?
- What academic/professional goals would the program help you to achieve following graduation?
- How does the doctoral program at Temple fit your individual interests, needs and future goals? Be certain to identify the faculty member whose research best matches your own interests.

**Standardized Test Scores:**

GRE: Not required, but scores from the general test taken no more than 5 years prior to application may be submitted.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Master's: 48*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5262	Introduction to Qualitative Research	3
EDUC 8401	Philosophical Foundations of Educational Research	3
EDUC 8404	Quantitative Analysis, Part I	3
EDUC 8405	Quantitative Analysis, Part II	3
EDUC 9987	Teaching Apprenticeship	3
EDUC 9991	Research Apprenticeship	3
EPSY 8627	Introduction to Research Design and Methods	3
	Advanced Methods Elective	3
<b>Literacy and Learners Concentration Courses</b>		
EDUC 8278	Found Theor Res Reading	3
EDUC 8279	Found Theor Res Writing	3
EDUC 8502	Social Contexts of Learning	3
EDUC 8503	Learning to Read	3
EDUC 9991	Research Apprenticeship <sup>1</sup>	3
	Elective	3
<b>Culminating Courses <sup>2</sup></b>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>48</b>

1

An elective may be selected in lieu of repeating EDUC 9991.

2

Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

**Internship:** An internship in the form of a research apprenticeship is required.

**Culminating Events:**

*Preliminary Examination:*

The purpose of the preliminary examination is for students to demonstrate their development in the three core areas of a faculty member's life: research, teaching and service. The exam requires students to undertake an integrative analysis of research; to demonstrate that they can bring research and theory into effective practice in their teaching; and to exhibit their ability to provide professional service. Preliminary exams are evaluated by a committee of faculty in the concentration. Evaluators look for a breadth and depth of understanding of research and theory; a critical application of that knowledge to specific phenomena and to teaching; integrative reasoning ability; and an ability to write technical prose.

*Proposal with Oral Defense:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem; an exhaustive survey and review of literature related to the problem; and a detailed methodological plan for investigating the problem. The proposal should be completed and approved no more than one year after completing coursework.

The proposal is defended in an open hearing attended by the student's Doctoral Advisory Committee, which is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty

members. Two members, including the Chair, must be from, or affiliated with, Literacy and Learners. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress. Upon approval of the proposal by the Doctoral Advisory Committee, a timeline for completing the investigation and writing process is established.

#### *Dissertation with Oral Defense:*

The doctoral dissertation is an original study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be of sufficient quality for publication in an academic journal.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least two additional faculty members, one of whom must be from outside the concentration. The Dissertation Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Shimada Resource Center at least 10 days before the defense is to be held. After the time, date and room for the defense have been established, the completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," is sent to the Graduate School. A flyer announcing the defense is posted in a public location in the College.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/education-phd-ed-educ-phd>

### Department Information:

Literacy and Learners PhD Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### *Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### *Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### *Program Coordinator:*

Dr. Sabrina Neugebauer  
[sabrina.neugebauer@temple.edu](mailto:sabrina.neugebauer@temple.edu)

## Education/Science, Mathematics and Educational Technology PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Philosophy in Education.

### About the Program

The interdisciplinary PhD program in Education, with a concentration in Science, Mathematics and Educational Technology, prepares students to contribute new knowledge to the fields of science, mathematics and educational technology. The program defines science and mathematics learning very broadly, preparing students to take on a variety of roles in science and mathematics education. Students can focus on any aspect of teaching and learning inclusive of students, teachers and adult learners, with priority in admissions decisions given to those who intend to pursue topics aligned with current faculty research interests. However, because of our strategic location in North Philadelphia, we have a strong and demonstrated commitment to issues of teaching, learning and schooling in urban contexts. The program is grounded in the dual belief that education is a primary mechanism for social justice and that educational research has the capacity to improve the material conditions of people's lives.

The doctoral program in Science, Mathematics and Educational Technology prepares students in two ways: through academic coursework and through an intensive mentoring relationship with various faculty members. Coursework emphasizes a broad knowledge of critical lines of inquiry in science or mathematics education and the development of research and analytic skills, with an emphasis on educational technology. Research opportunities include working alongside prominent faculty on federally funded projects; exposure and presentations at regional and national conferences; and co-authoring papers for publication in top-tiered journals. Practice and research are blended in a program that promotes both teaching and learning.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students may matriculate either full- or part-time. Most courses are offered in the evening to accommodate working professionals. The length of time to complete the doctoral degree program varies depending on the number of courses taken each term.

**Job Prospects:** Graduates are prepared to pursue careers in academic or research-oriented positions as well as leadership positions within science or mathematics education or educational technology within K-16 schools.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated***

**courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: December 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

**From Whom:** Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** Students who hold a master's degree in a related field may transfer in up to 30 credits as advanced standing, with approval.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a 500- to 1,000-word statement in autobiographical style covering the following areas:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Education help you explore those interests?
- What academic/professional goals would the program help you to achieve following graduation?
- How does the doctoral program at Temple fit your individual interests, needs and future goals? Be certain to identify the faculty member whose research best matches your own interests.

### Standardized Test Scores:

GRE: Not required, but scores from the general test taken no more than 5 years prior to application may be submitted.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Master's: 48

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5262	Introduction to Qualitative Research	3
EDUC 8401	Philosophical Foundations of Educational Research	3
EDUC 8404	Quantitative Analysis, Part I	3
EDUC 8405	Quantitative Analysis, Part II	3
EDUC 9987	Teaching Apprenticeship	3
EDUC 9991	Research Apprenticeship	3
EPSY 8627	Introduction to Research Design and Methods	3
	Advanced Methods Elective	3
<b>Science, Mathematics and Educational Technology Concentration Courses</b>		
EDUC 8501	Motivation in Education	3
EDUC 8502	Social Contexts of Learning	3
EDUC 8504	Problem Solving and Reasoning in STEM Education	3
EDUC 8506	Cognition and Learning in Education	3
EDUC 9255	Research Seminar in Science, Mathematics, and Educational Technology	3
EDUC 9991	Research Apprenticeship <sup>1</sup>	3
<b>Culminating Courses <sup>2</sup></b>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>48</b>

1

An elective may be selected in lieu of repeating EDUC 9991.

2

Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

**Internship:** An internship in the form of a research apprenticeship is required.

### Culminating Events:

**Preliminary Examination:**

The purpose of the preliminary examination is for students to demonstrate their development in the three core areas of a faculty member's life: research, teaching and service. The exam requires

students to undertake an integrative analysis of research; to demonstrate that they can bring research and theory into effective practice in their teaching; and to exhibit their ability to provide professional service. Preliminary exams are evaluated by a committee of faculty in the concentration. Evaluators look for a breadth and depth of understanding of research and theory; a critical application of that knowledge to specific phenomena and to teaching; integrative reasoning ability; and an ability to write technical prose.

*Proposal with Oral Defense:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem; an exhaustive survey and review of literature related to the problem; and a detailed methodological plan for investigating the problem. The proposal should be completed and approved no more than one year after completing coursework.

The proposal is defended in an open hearing attended by the student's Doctoral Advisory Committee, which is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from, or affiliated with, Math and Science Education. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress. Upon approval of the proposal by the Doctoral Advisory Committee, a timeline for completing the investigation and writing process is established.

*Dissertation with Oral Defense:*

The doctoral dissertation is an original study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least two additional faculty members, one of whom must be from outside Math and Science Education. The Dissertation Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Shimada Resource Center at least 10 days before the defense is to be held. After the time, date and room for the defense have been established, the completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," is sent to the Graduate School. A flyer announcing the defense is posted in a public location in the College.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/education-phd-ed-educ-phd>

### Department Information:

Science, Mathematics and Educational Technology PhD Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

*Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

*Program Coordinator:*

Dr. Meixia Ding  
[meixia.ding@temple.edu](mailto:meixia.ding@temple.edu)

## Education/Special Education PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Philosophy in Education.

### About the Program

The Special Education (SPED) program in the College of Education equips teachers with deep understanding of the sociocultural context of education, high-impact instructional practices, and empirically supported, preventative approaches to provide equitable education to children with disabilities. Through the program, students gain:

- Up-to-date knowledge of the research and issues pertaining to special education;
- The ability to apply comprehensive research skills to problems relating to the education of children with special needs;
- The competence to prepare highly qualified teachers that are equipped to understand the complexities and individual differences of children with special needs, especially within urban environments; and
- A deep knowledge of how public policy and political and social variables shape research and service delivery activities within special education.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students may matriculate either full- or part-time. Most courses are offered in the evening to accommodate working professionals. The length of time to complete the doctoral degree program varies depending on the number of courses taken each term.

**Job Prospects:** Graduates are prepared to assume research positions at colleges and universities and/or to be engaged in the preparation of special educational professionals at both the pre-service and in-service levels. They are expected to contribute to the advancement of evidence-based practice throughout their careers.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** Students who hold a master's degree in a related field may transfer in up to 30 credits as advanced standing, with approval.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a 500- to 1,000-word statement in autobiographical style covering the following areas:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Education help you explore those interests?
- What academic/professional goals would the program help you to achieve following graduation?
- How does the doctoral program at Temple fit your individual interests, needs and future goals? Be certain to identify the faculty member whose research best matches your own interests.

### Standardized Test Scores:

GRE: Not required, but scores from the general test taken no more than 5 years prior to application may be submitted.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 48*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5262	Introduction to Qualitative Research	3
EDUC 8401	Philosophical Foundations of Educational Research	3
EDUC 8404	Quantitative Analysis, Part I	3
EDUC 8405	Quantitative Analysis, Part II	3
EDUC 9987	Teaching Apprenticeship	3
EDUC 9991	Research Apprenticeship	3
EPSY 8627	Introduction to Research Design and Methods	3
	Advanced Methods Elective	3
<b>Special Education Concentration Courses</b>		
EDUC 8502	Social Contexts of Learning	3
EDUC 8505	Assessment and Evaluation of Students	3
EDUC 8506	Cognition and Learning in Education	3
EDUC 9991	Research Apprenticeship	3
SPED 8101	Trends and Issues in Special Education	3
SPED 8701	Proseminar in Individual Differences	3
<b>Culminating Courses</b> <sup>1</sup>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>48</b>

1

Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

**Internship:** An internship in the form of a research apprenticeship is required.

#### **Culminating Events:**

##### *Preliminary Examination:*

The purpose of the preliminary examination is for students to demonstrate their development in the three core areas of a faculty member's life: research, teaching and service. The exam requires students to undertake an integrative analysis of research; to demonstrate that they can bring research and theory into effective practice in their teaching; and to exhibit their ability to provide professional service. Preliminary exams are evaluated by a committee of faculty in the concentration. Evaluators look for a breadth and depth of understanding of research and theory; a critical application of that knowledge to specific phenomena and to teaching; integrative reasoning ability; and an ability to write technical prose.

##### *Proposal with Oral Defense:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the context and background surrounding a particular research problem; an exhaustive survey and review of literature related to the problem; and a detailed methodological plan for investigating the problem. The proposal should be completed and approved no more than one year after completing coursework.

The proposal is defended in an open hearing attended by the student's Doctoral Advisory Committee, which is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from, or affiliated with, Special Education. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress. Upon approval of the proposal by the Doctoral Advisory Committee, a timeline for completing the investigation and writing process is established.

##### *Dissertation with Oral Defense:*

The doctoral dissertation is an original study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of business; and be prepared for publication in an academic journal.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least two additional faculty members, one of whom must be from outside Special Education. The Dissertation Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Shimada Resource Center at least 10 days before the defense

is to be held. After the time, date and room for the defense have been established, the completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," is sent to the Graduate School. A flyer announcing the defense is posted in a public location in the College.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/education-phd-ed-educ-phd>

### **Department Information:**

Special Education PhD Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### **Submission Address for Application Materials:**

<https://apply.temple.edu/CEHD>

### **Department Contacts:**

#### *Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### *Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### *Program Coordinator:*

Dr. Jason Travers  
[jason.travers@temple.edu](mailto:jason.travers@temple.edu)

## **Educational Leadership MEd**

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

### **About the Program**

The cohort-based Master of Education in Educational Leadership, offered in collaboration with Church Teachers' College, Mandeville, Jamaica, prepares students to become transformative leaders in a variety of educational settings and roles, including leadership positions in the direction and management of K-12 schools and higher education. Graduates are prepared for the roles of principal, business administrator, and other administrative positions in schools, school districts, colleges and universities. The Educational Leadership MEd program is designed to help students gain both new ways to think about education in Jamaica and to develop a robust global perspective.

### **Admission Requirements and Deadlines**

#### **Application Deadline:**

*Fall:* March 1

*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Official Transcript:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted. Official diploma transcripts should be submitted, if applicable.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 36*

*Required Courses:*

Code	Title	Credit Hours
AOD 5532	Leadership and Management	3
EDAD 5063	Educational Reform	3
EDAD 5300	Intro Issues Sch Ldship	3
EDAD 5301	Leadership for Learning	3
EDAD 5303	Ldshp in Diverse Context	3
EDAD 5304	Sch Operations, Mgmt, Tech	3
EDAD 5305	Knowledge Sch Improve	3
EDAD 5307	Clin Exp in Sch Ldship	3
EDAD 5742	Pro-Seminar in Ed Policy	3
EDAD 5895	School Violence: Risk Prevention	3
EDUC 5101	Critical Understanding of Social Science Research	3
EDUC 5212	Curriculum, Instruction, and Technology in Education	3
<b>Total Credit Hours</b>		<b>36</b>

**Culminating Event:** Successful completion of coursework is required to earn the Educational Leadership MEd degree.

## Contacts

### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application

#### Materials:

<https://apply.temple.edu/CEHD>

## Educational Leadership EdD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Education in Educational Leadership.

## About the Program

The EdD in Educational Leadership program is intended for a wide audience of individuals with experience in K-12 educational settings who desire to advance their careers. Many educational professionals want a defined, predictable program of study that supports steady progress and complements the busy schedule of a teacher and/or school leader. This program institutes a cohort-based executive-format program, wherein courses are offered on weekends and during the summer, accommodating the schedules of working professionals. The program fosters and reinforces Temple's commitment to social justice, equity and ethical practices. The courses, course sequence, and dissertation process are designed in a way that the program coheres around these issues and their implications for educational leadership. This cohort program consists of a fixed-course sequence and is structured to allow students to complete their degree in three years.

The program objectives reflect the essential values of educational leadership and the foundational knowledge, skills and abilities required for effective postsecondary administrative practice. Students gain:

- a deep understanding of the historical, social, legal, economic, cultural and political contexts of higher education administration;
- an advanced understanding of the governance and finance structures of school districts, school organizations and governmental agencies;
- sensitivity to the complexities of organizational culture and the ability to lead effectively in diverse settings;
- the ability to critically examine, diagnose and address persistent problems and inequities in education;
- the ability to identify, critically review, and apply evidence from scholarly and policy research, and a commitment to using evidence routinely in decision-making; and
- skills and habits of reflective practice that support equitable and ethical decision-making in complex situations.

The essential expected learning outcomes of the Temple EdD program in Educational Leadership include graduates' ability to demonstrate advanced understanding of:

- effective practices for equitable and ethical school, school district, and system leadership;
- leadership and learning theories;
- the history, politics, policy and philosophy of public, charter and independent educational programs;
- schooling, school governance, organizational leadership and civic engagement; and
- how political, societal and identity factors contribute to student and school success.

Graduates will also be able to demonstrate the ability to:

- critically engage, diagnose, assess and address issues of equity and inequality that exist in schools and school districts;
- review and synthesize research and practitioner literature to examine educational issues;
- select and apply research methods and theoretical frameworks to address problems of practice; and
- design, engage in, and thoughtfully report on research in multiple designated formats, such as dissertation, white paper and presentation.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students matriculate part-time. Courses are offered in a cohort-based executive-format program on weekends and during the summer to accommodate the schedules of working professionals. A fixed-course sequence allows students to complete the doctoral degree program in three years.

**Affiliation(s):** The program is a member of the University Council for Educational Administration (UCEA).

**Job Prospects:** Graduates typically become senior administrators in public or private schools, administrators in state or federal agencies, and administrators or professors in institutions of higher education.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

**Application Deadline:**

*Summer II:* March 1

Applicants should submit all required documents by the application deadline to receive priority consideration for admission.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** A master's degree is preferred but not required. At a minimum, applicants are required to have successfully completed at least 30 graduate credits in a related field to be admitted to the program. All applicants are expected to transfer in up to 30 credits as advanced standing, with approval.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a 500- to 1,000-word statement in autobiographical style covering the following areas:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Education help you explore those interests?
- What academic/professional goals would the program help you to achieve following graduation?
- How does the doctoral program at Temple fit your individual interests, needs and future goals? Be certain to identify the faculty member whose research best matches your own interests.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's:* 42

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
AOD 5534	Group Facilitation and Consultation	3
EDAD 8093	Administration Research Seminar	3
EDAD 8461	Ethical Leadership	3
EDAD 8553	Democratic, Equitable, and Ethical Leadership	3
EDAD 8635	Education Policy Analysis	3
EDAD 8636	Research for Change	3
EDAD 8653	Civic Leadership	3
EDAD 8755	Organizational Dynamics	3
EDUC 5262	Introduction to Qualitative Research	3
EDUC 5325	Introduction to Statistics and Research	3
EPSY 8627	Introduction to Research Design and Methods	3



SPED 8101	Trends and Issues in Special Education	3
<b>Research Courses <sup>1</sup></b>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation <sup>2</sup>	
<b>Total Credit Hours</b>		<b>42</b>

<sup>1</sup>  
Students are required to complete a minimum of 6 credits that include EDUC 9998 and EDUC 9999. Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

<sup>2</sup>  
Students enroll in EDUC 9999 after their proposal is approved, taking at least 1 credit each term until the dissertation is defended and filed with the Graduate School. A minimum of 2 credits of EDUC 9999 must be earned.

### Proposed Plan of Study Outlined by Year and Term

Year 1		
Summer II		Credit Hours
EDAD 8461	Ethical Leadership	3
EPSY 8627	Introduction to Research Design and Methods	3
<b>Credit Hours</b>		<b>6</b>
Fall		
EDAD 8635	Education Policy Analysis	3
EDUC 5325	Introduction to Statistics and Research	3
<b>Credit Hours</b>		<b>6</b>
Spring		
EDAD 8653	Civic Leadership	3
EDUC 5262	Introduction to Qualitative Research	3
<b>Credit Hours</b>		<b>6</b>
Year 2		
Summer II		Credit Hours
EDAD 8636	Research for Change	3
EDAD 8755	Organizational Dynamics	3
<b>Credit Hours</b>		<b>6</b>
Fall		
EDAD 8093	Administration Research Seminar	3
SPED 8101	Trends and Issues in Special Education	3
<b>Credit Hours</b>		<b>6</b>
Spring		
EDAD 8553	Democratic, Equitable, and Ethical Leadership	3

EDUC 9998	Dissertation Proposal Design <sup>1</sup>	1
<b>Credit Hours</b>		<b>4</b>
Year 3		
Summer II		Credit Hours
AOD 5534	Group Facilitation and Consultation	3
<b>Credit Hours</b>		<b>3</b>
Fall		
EDUC 9999	Doctor of Education Dissertation <sup>1,2</sup>	2
<b>Credit Hours</b>		<b>2</b>
Spring		
EDUC 9999	Doctor of Education Dissertation <sup>1,2</sup>	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>42</b>

<sup>1</sup>  
Students are required to complete a minimum of 6 credits that include EDUC 9998 and EDUC 9999. Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

<sup>2</sup>  
Students enroll in EDUC 9999 after their proposal is approved, taking at least 1 credit each term until the dissertation is defended and filed with the Graduate School. A minimum of 2 credits of EDUC 9999 must be earned.

### Curriculum ONLY for the EdD Program in Jamaica, in collaboration with Church Teachers' College

#### Program Requirements

**General Program Requirements:**  
*Number of Credits Required Beyond the Master's: 45*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDAD 5301	Leadership for Learning	3
EDAD 5303	Ldshp in Diverse Context	3
EDAD 5653	Educational Leadership as Civic Leadership	3
EDAD 8093	Administration Research Seminar	3
EDAD 8461	Ethical Leadership	3
EDAD 8635	Education Policy Analysis	3
EDAD 8775	Understanding Organizational Dynamics in Educational Settings	3
EDAD 8787	Administration of Higher Education	3

EDUC 5101	Critical Understanding of Social Science Research	3
EDUC 5262	Introduction to Qualitative Research	3
EDUC 5325	Introduction to Statistics and Research	3
EDUC 8102	Ethnographic Research Methods	3
or EPSY 8625	Intermediate Educational Statistics	
URBE 5401	Policy and Practice in Urban Education	3
<b>Research Courses</b> <sup>1</sup>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>45</b>

1

Of the 6 research credits required, a minimum of 2 credits of EDUC 9999 Doctor of Education Dissertation must be taken.

### Culminating Events:

#### *Preliminary Examination:*

At the end of the academic term in which students are enrolled in EDAD 8093 Administration Research Seminar and prior to completion of the dissertation proposal, students complete a preliminary exam (also sometimes called "comps" or "comprehensive exam"). The preliminary exam consists of written responses to three questions developed by the instructor of the Research Seminar. Through the comprehensive exam, students must demonstrate the ability to:

- situate and define a chosen topic or field within the concepts and history of the field;
- compare, contrast and justify various research methods appropriate to investigation of a practice-based research problem; and
- critically synthesize the extant scholarly and practice-focused literature that informs administrative practice related to the topic.

Students must obtain a passing score on the preliminary exam prior to registering for EDUC 9998 Dissertation Proposal Design. A passing score is also required for elevation to candidacy following a successful proposal defense.

#### *Dissertation Proposal:*

In the term immediately following completion of the EDAD 8093 Administration Research Seminar and successful completion of the comprehensive exam, students enroll in EDUC 9998 Dissertation Proposal Design. Like EDAD 8093 Administration Research Seminar, EDUC 9998 Dissertation Proposal Design serves as a structured, intensive cohort-based monthly workshop in which students design and defend a dissertation proposal that outlines a rigorous plan for empirical study of an issue relevant to the student's professional responsibilities or aspirations. The proposal must incorporate a thorough and critical review of literature relevant to the topic, a discussion of theoretical approaches to understanding and studying the topic, a conceptual or theoretical framework that will guide the study, and a robust methodological plan that includes assurances of completing Institutional Review Board (IRB) review and any interview or other protocols necessary to submit for IRB review. Dissertation proposal defense occurs at any point during or at the

end of the academic term. Students receive feedback from the faculty advisor, other committee members and their cohort peers during their defense.

#### *Dissertation:*

The EdD dissertation is distinct from the PhD dissertation in that the intent of the EdD dissertation is not to build theory but to make a substantive contribution to practice-focused scholarship in a particular domain of K-12 educational leadership. EdD dissertations are typically less lengthy than PhD dissertations and cover a smaller scope of theorizing and data collection. They are, however, held to the same standards as PhD dissertations with respect to methodological validity, data analysis, and writing quality and clarity.

Following successful defense of the dissertation proposal and after securing IRB approval, students carry out an original research project intended to make a significant practice-based contribution to the field. While the EdD dissertation is meant to have practical and applied relevance, however, it is nonetheless expected to engage rigorously with existing literature and theory appropriate to the student's chosen topic and to demonstrate the student's ability to execute robust methods appropriate to the student's research question(s). Toward this end, EdD students:

- prepare a dissertation study report that is a standard academic manuscript, which includes an introduction, literature review, conceptual/theoretical framework, methodology, results, discussion and references; and
- produce a white paper/executive summary that distills the lessons of their research for practitioners in their field.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/educational-leadership-edd-ed-edls-edd>

### Department Information:

Educational Leadership Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### *Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### *Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### *Program Coordinator:*

Dr. Christopher W. McGinley

christopher.mcginley@temple.edu

*Policy, Organizational and Leadership Studies Department Chair:*  
Dr. Christopher W. McGinley  
Professor of Practice in Educational Leadership  
christopher.mcginley@temple.edu

## Educational Leadership and Policy MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Educational Leadership and Policy.

### About the Program

The MEd degree in Educational Leadership and Policy is grounded in the social justice mission of the College of Education and Human Development. Consequently, the curriculum is uniquely focused on urban schooling, school leadership, urban education in the broader community, and the policies that impact schools and schooling in urban centers.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** Three concentrations are offered:

- Education Policy
- School Leadership, for which enrolled students take an approved course of study in partial fulfillment of the requirements for state certification as Principal or Supervisor of Curriculum and Instruction
- Urban Education

**Job Prospects:** The MEd degree in Educational Leadership and Policy prepares students for positions of leadership in school settings, particularly in urban schools.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1  
*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

### Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30, or 36 for students completing optional clinical experiences to gain certification through the School Leadership concentration

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDAD 5201	Action and Collaborative Research Seminar	3
EDAD 5302	Contexts for Sch Reform	3
EDAD 5303	Ldshp in Diverse Context	3
EDUC 5101	Critical Understanding of Social Science Research	3
URBE 5401	Policy and Practice in Urban Education	3
URBE 5611	Reforming City Schools	3
<b>Concentration Courses</b>		<b>12-18</b>
Education Policy		
EDAD 5403	Economics of Education	
EDAD 5404	Federal Policy and Local Impact	
EDUC 8404	Quantitative Analysis, Part I	

EDUC 8405	Quantitative Analysis, Part II
School Leadership	
EDAD 5301	Leadership for Learning
EDAD 5304	Sch Operations, Mgmt, Tech
EDAD 5306	Change Leadership
URBE 5516	School-Community Partnerships in Urban Settings
Optional Clinical Experience Courses <sup>1</sup>	
EDAD 5307	Clin Exp in Sch Ldship
EDAD 5308	Clinical Experiences in School Leadership 2
Urban Education	
URBE 5417	The Urban Environment
URBE 5501	Urban Schools
URBE 5516	School-Community Partnerships in Urban Settings
URBE 5565	The Origins of Urban Education
<b>Total Credit Hours</b>	<b>30-36</b>

1

Students may elect to complete six credits of clinical experiences that offer the coursework needed to apply for Pennsylvania certification as Principal and/or Supervisor of Curriculum and Instruction.

**Culminating Event:** Successful completion of coursework is required to earn the Educational Leadership and Policy MEd degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/educational-leadership-and-policy-med-ed-edlp-med>

### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

#### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

#### Program Coordinator:

Dr. Christopher W. McGinley  
christopher.mcginley@temple.edu

#### Policy, Organizational and Leadership Studies Department Chair:

Dr. Christopher W. McGinley  
Professor of Practice in Educational Leadership

christopher.mcginley@temple.edu

## Higher Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Higher Education.

### About the Program

The MEd in Higher Education is intended for early- and mid-career individuals aspiring to serve as administrators in a variety of settings, including colleges and universities, community colleges, higher education systems, proprietary/vocational institutions, and college access and pathway programs. The distinctive feature of the MEd program is its emphasis on urban issues and themes of equity and access in postsecondary education.

Extending Temple's traditional commitment to social justice and educational opportunity, this program develops expert practitioners, i.e., those who can enact the kinds of changes that are necessary to meet state and federal college completion goals, improve equity in student postsecondary outcomes, strengthen the role of higher education for the public good, and create structures and cultures that are conducive to student success.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program in a hybrid format, both through classes offered after 5:30 p.m. and online courses. The degree program can be completed on a full- or part-time basis.

**Job Prospects:** Graduates are prepared to seek employment in a variety of professional areas in higher education, including academic advising, academic support, admissions, advancement, athletics, business services, counseling and health services, facilities, financial aid, human resources, institutional research and planning, learning centers, multicultural and diversity affairs, public relations, residence life, and training and development.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

Number Required: 2

From Whom: Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

**Program Requirements**

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5101	Critical Understanding of Social Science Research	3
HIED 5101	Introduction to Higher Education	3
HIED 5102	Administration of Higher Education	3
HIED 5103	Access and Equity in Higher Education	3
HIED 5104	College Students and Development Theory	3
<b>Electives</b>		<b>12</b>
Select four from the following: <sup>1</sup>		
AOD 5535	Organizational Assessment, Design and Strategy	
CPSY 5698	Fundamental Counseling Techniques	
EDUC 5010	Special Topics in Education <sup>2</sup>	
EDUC 5325	Introduction to Statistics and Research	
EDUC 8232	Technology, Teaching, and Learning	
EPSY 5501	ILT: Multimedia Learning	
HIED 5201	Diversity Issues in Higher Education	

HIED 5202	The Costs of College	
HIED 5203	Getting into College: Strategic Enrollment Management	
HIED 5204	Diversity Facilitation and Leadership	
HIED 5301	Planning and Assessment in Higher Education	
HIED 5401	Student Affairs in Higher Education	
HIED 5502	Digital Education Leadership	
HIED 5801	Gender Issues in Education	
HIED 5802	Leadership in Higher Education	
HIED 5803	Law and Policy in Higher Education	
HIED 5804	The Community College	
URBE 5417	The Urban Environment	
URBE 5516	School-Community Partnerships in Urban Settings	
<b>Capstone Course</b>		
HIED 9995	Master's Capstone in Higher Education	3
<b>Total Credit Hours</b>		<b>30</b>

1

With documented approval from the student's advisor, other course(s) may be selected as focused electives.

2

EDUC 5010 can be repeated for credit. Each academic term, faculty advise students of special topics offerings that may be of particular interest to Higher Education MEd students.

**Culminating Event:**

Capstone Course:

Students complete HIED 9995 Master's Capstone in Higher Education as their culminating event.

**Contacts**

**Program Web Address:**

<https://www.temple.edu/academics/degree-programs/higher-education-med-ed-hied-med>

**Department Information:**

Dept. of Policy, Organizational and Leadership Studies  
 College of Education and Human Development  
 1301 Cecil B. Moore Avenue  
 Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
 215-204-0999

**Submission Address for Application Materials:**

<https://apply.temple.edu/CEHD>

**Department Contacts:**

Admissions:

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
 215-204-0999

Graduate Advising:

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

*Program Coordinator:*

Dr. Jennifer M. Johnson  
jmjohnson@temple.edu

*Policy, Organizational and Leadership Studies Department Chair:*

Dr. Christopher W. McGinley  
Professor of Practice in Educational Leadership  
christopher.mcginley@temple.edu

## Higher Education EdD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Education in Higher Education.

### About the Program

The EdD in Higher Education is a rigorous program of study that helps students develop the skills needed to diagnose and resolve organizational challenges and to craft and evaluate programs and policies impacting student success. The program features a core set of courses that reflect the essential values of the Temple University graduate program in higher education and the foundational knowledge, skills and abilities required for effective postsecondary administrative practice. This program combines the theoretical and methodological foundations of academic research with an applied focus that helps students develop the professional and interpersonal wisdom necessary to successfully manage change within complex organizational structures.

The Higher Education EdD degree prepares its graduates to be not just effective administrators but skillful and visionary leaders. The essential expected learning outcomes of the EdD in Higher Education include:

- Demonstrate advanced understanding of the foundations of higher education, including knowledge of the history, politics, economics and philosophy of higher education, theories of student development and organizations, and the institutional and social factors that contribute to student success in higher education.
- Demonstrate a disciplined and analytic approach to professional practice in the organization and administration of academic and student affairs, including the use of assessment, evaluation and research in decision-making; the ability to engage in strategic planning and goal setting; the ability to lead with cultural sensitivity and ethical judgment; the ability to understand organizational behavior and dynamics; and the ability to communicate clearly and effectively about complex administrative issues to a wide array of audiences and stakeholders.
- Demonstrate knowledge related to the functional core of the university, including teaching, research and service; management skills, such as problem solving, planning, budgeting, fundraising, and assessment and evaluation; and human relations skills, such as managing conflict, communicating effectively, valuing diversity, and promoting organizational and individual development.
- Gain a conceptual understanding of higher education organizations when viewed from multiple perspectives, including organizations as academic enterprises, loosely coupled bureaucratic systems, and complex multifarious cultures, and be able to adopt those perspectives as analytic lenses for understanding and addressing administrative issues.
- Demonstrate the ability to select and apply appropriate research and program evaluation designs and methods, including understanding principles of research study design; synthesizing relevant literature

from across fields to inform practice and research; articulating and applying theory or conceptual frameworks to support analysis and evaluation; having familiarity with an array of qualitative and quantitative methods and competence in data analysis strategies appropriate for contributing knowledge to advance effective higher education practice; and being competent in academic writing conventions.

- Enact habits of reflective and equity-conscious administrative practitioners, including conducting critical inquiry into issues of inequity or disparities in student access and success; engaging as learning agents on behalf of the institution; and collecting, interpreting and communicating evidence to substantiate administrative issues.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students may matriculate either full- or part-time. Most courses are offered in the evening to accommodate working professionals. The length of time to complete the doctoral degree program varies depending on the number of courses taken each term.

**Affiliation(s):** The program is a member of the University Council for Educational Administration (UCEA).

**Job Prospects:** Graduates typically become senior administrators at public or private 2- and 4-year institutions of higher education in academic or student affairs; administrators in state or federal agencies; scholar-practitioners in college access programs; faculty in institutions of higher education; or administrators in various academic disciplines.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* February 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** A master's degree in a related field, with some exceptions, is required for admission to the

program. Students who have completed a master's degree with at least 30 credits will be designated as admitted with master's degree.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Using autobiographical style, explain your interest in pursuing a doctoral degree in education. The statement should address the following questions:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Education help you explore those interests?
- What academic/professional goals would the program help you to achieve following graduation?
- How does the doctoral program at Temple fit your individual interests, needs and future goals – and which faculty member's research best matches your own interests?

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Interview:** At the request of the Admissions Committee, an interview may be required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

#### Other Requirements:

1. Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.
2. Professional experience in higher education or work experience related to the applicant's goals is strongly recommended.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Master's:* 39

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
HIED 8101	Advanced Seminar on Higher Education Administration	3
HIED 8102	Higher Education Economics and Finance	3
HIED 8103	Equity in Higher Education Policy and Practice	3
HIED 8104	Seminar on Theory in Higher Education and Leadership	3
<b>Electives</b> <sup>1</sup>		<b>6</b>
<b>Advanced Research Methods Courses</b>		
EDUC 5262	Introduction to Qualitative Research <sup>2</sup>	3
EDUC 5325	Introduction to Statistics and Research <sup>2</sup>	3
	or EDUC 8404 Quantitative Analysis, Part I	
EPSY 8627	Introduction to Research Design and Methods	3
In addition, select one course from the following: <sup>3</sup>		3
EDUC 5244	Class Discourse	
EDUC 8102	Ethnographic Research Methods	
EDUC 8405	Quantitative Analysis, Part II	
EPSY 5529	Tests and Measurements	
EPSY 8625	Intermediate Educational Statistics	
EPSY 8825	Advanced Data Analysis	
EPSY 8826	Multivariate Research Methods	
HIED 8262	Advanced Practice-Based Qualitative Research in Higher Education	
HIED 8287	Research Practicum	
<b>Research Course</b>		
HIED 8093	Advanced Higher Education Research Seminar <sup>4</sup>	3
<b>Culminating Courses</b> <sup>5</sup>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>39</b>

1

Students select a two-course cognate based on their dissertation interests. They should consult with their advisor on the selection of these electives.

2

Students must take the "introductory" versions of the qualitative (EDUC 5262) and quantitative (EDUC 5325) courses before enrolling in more advanced courses for either methodology. A student may be exempted from the introductory courses if program faculty believe the student's prior coursework warrants an exemption. Approval from the student's advisor is required.

3

With documented approval from the student's advisor, an alternate course may be selected as an advanced research method course.

4

HIED 8093 must be taken during or after the last term of academic coursework.

5

Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

#### Culminating Events:

**Comprehensive Exam:**

At the end of the academic term in which students are enrolled in HIED 8093 Advanced Higher Education Research Seminar and prior to completion of the dissertation proposal, students complete a comprehensive exam in order to advance to candidacy for the doctoral degree. The comprehensive exam consists of written responses to three questions developed by the instructor of the Research Seminar who, in most cases, will serve as the student's primary dissertation advisor and chair. Through the comprehensive exam, students must demonstrate the ability to:

- situate and define a chosen topic or field within the concepts and history of the field;
- compare, contrast and justify various research methods appropriate to investigation of a practice-based research problem; and
- critically synthesize the extant scholarly and practice-focused literature that informs administrative practice related to the topic.

Successful completion of the comprehensive exam advances students to doctoral candidate status and aids in preparation of the dissertation proposal.

**Dissertation Proposal:**

In the term immediately following completion of the HIED 8093 Advanced Higher Education Research Seminar and successful completion of the comprehensive exam, students enroll in EDUC 9998 Dissertation Proposal Design. Students enroll in a section of EDUC 9998 with the same cohort of students and instructor with whom they were enrolled in HIED 8093. Like HIED 8093 Advanced Higher Education Research Seminar, EDUC 9998 Dissertation Proposal Design serves as a structured, intensive cohort-based monthly workshop in which students design and defend a dissertation proposal that outlines a rigorous plan for empirical study of an issue relevant to the student's professional responsibilities or aspirations. The proposal must incorporate a thorough and critical review of literature relevant to the topic, a discussion of theoretical approaches to understanding and studying the topic, a conceptual or theoretical framework that will guide the study, and a robust methodological plan that includes assurances of completing Institutional Review Board (IRB) review and any interview or other protocols necessary to submit for IRB review. Dissertation proposal defense occurs at any point during or at the end of the academic term. Students receive feedback from the faculty advisor, other committee members, and their cohort peers during their defense. Students are encouraged to defend the proposal no later than the end of the term in which they are enrolled in EDUC 9998.

**Dissertation:**

The EdD dissertation is distinct from the PhD dissertation in that the intent of the EdD dissertation is not to build theory but to make a substantive contribution to practice-focused scholarship in a particular domain of higher education. EdD dissertations are typically less lengthy than PhD dissertations and cover a smaller scope of theorizing and data collection. They are, however, held to the same standards as PhD dissertations with respect to methodological validity, data analysis, and writing quality and clarity. Toward this end, EdD students:

- prepare a dissertation study report that is a standard academic manuscript, which includes an introduction, literature review, conceptual/theoretical framework, methodology, results, discussion and references; and
- produce a Practice Guide that is three to five pages in length. The Practice Guide distills the lessons of the student's research into

succinct recommendations or best practices for practitioners in their field.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/higher-education-edd-ed-hied-edd>

**Department Information:**

Higher Education Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

**Submission Address for Application Materials:**

<https://apply.temple.edu/CEHD>

**Department Contacts:****Admissions:**

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

**Graduate Advising:**

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

**Program Coordinator:**

Dr. Jennifer M. Johnson  
[jmjohnson@temple.edu](mailto:jmjohnson@temple.edu)

**Policy, Organizational and Leadership Studies Department Chair:**

Dr. Christopher W. McGinley  
Professor of Practice in Educational Leadership  
[christopher.mcginley@temple.edu](mailto:christopher.mcginley@temple.edu)

**Middle Grades Education/  
Language Arts MEd**

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

**About the Program**

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of



academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

The official score report must demonstrate a passing score on these two tests:

- *Praxis*® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- *Praxis*® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis*® Subject Assessment in their intended content area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis*® PA Grades 4–8 Subject Concentration: English Language Arts (5156) – 156 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-

kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
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EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching and Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

## Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
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[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

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### Graduate Advising:

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[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

### Program Coordinator:

Dr. Tim Fukawa-Connelly  
[tim.fc@temple.edu](mailto:tim.fc@temple.edu)

### Teaching and Learning Department Chair:

Dr. Kristie Newton  
[KJNewton@temple.edu](mailto:KJNewton@temple.edu)

## Middle Grades Education/ Mathematics MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

## About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers, particularly in math and science education, are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

The official score report must demonstrate a passing score on these two tests:

- *Praxis*® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- *Praxis*® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis*® Subject Assessment in their intended content area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis*® PA Grades 4–8 Subject Concentration: Mathematics (5158) – 173 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

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six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
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MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching and Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

### Admissions:

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Graduate Advising:

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

### Program Coordinator:

Dr. Tim Fukawa-Connelly  
[tim.fc@temple.edu](mailto:tim.fc@temple.edu)

### Teaching and Learning Department Chair:

Dr. Kristie Newton  
[KJNewton@temple.edu](mailto:KJNewton@temple.edu)

# Middle Grades Education/ Mathematics and Language Arts MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

## About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers, particularly in math and science education, are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students.

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- Language Arts/English
- Mathematics
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- Mathematics and Science
- Science
- Science and Language Arts/English

- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

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## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

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*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

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**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

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## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 31

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
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<b>Culminating Courses</b>		
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<b>Total Credit Hours</b>		<b>31</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

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- Social Studies
- Social Studies and Language Arts/English
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**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

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**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

The official score report must demonstrate a passing score on these two tests:

- *Praxis*® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- *Praxis*® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass one of the relevant *Praxis*® Subject Assessments in their intended content areas. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis*® PA Grades 4–8 Subject Concentration: Mathematics (5158) – 173 minimum score
- *Praxis*® PA Grades 4–8 Subject Concentration: Science (5159) – 156 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching and Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development

gradcehd@temple.edu

*Program Coordinator:*  
Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

*Teaching and Learning Department Chair:*  
Dr. Kristie Newton  
KJNewton@temple.edu

## Middle Grades Education/Science Med

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

### About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers, particularly in math and science education, are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).



**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
 Spring: November 1  
 Summer II: March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

Number Required: 2

**From Whom:** Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

The official score report must demonstrate a passing score on these two tests:

- *Praxis*® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- *Praxis*® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis*® Subject Assessment in their intended content area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis*® PA Grades 4–8 Subject Concentration: Science (5159) – 156 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 31

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3

SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3

### Culminating Courses

Select either Residency or Non-Residency Student Teaching and Seminar: 7

#### Residency Student Teaching and Seminar

EDUC 5801 Residency Practicum Capstone

EDUC 5802 Residency Student Teaching Capstone

EDUC 5888 Supervised Teaching

#### Non-Residency Student Teaching and Seminar

EDUC 5409 Research Methods and Induction Capstone

EDUC 5888 Supervised Teaching

**Total Credit Hours** 31

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

#### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

#### Program Coordinator:

Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

#### Teaching and Learning Department Chair:

Dr. Kristie Newton  
KJNewton@temple.edu

## Middle Grades Education/Science and Language Arts MEd

### COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

### About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers, particularly in math and science education, are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being

admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1  
Summer II: March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

The official score report must demonstrate a passing score on these two tests:

- Praxis® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- Praxis® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass one of the relevant Praxis® Subject Assessments in their intended content areas. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- Praxis® PA Grades 4–8 Subject Concentration: English Language Arts (5156) – 156 minimum score

- Praxis® PA Grades 4–8 Subject Concentration: Science (5159) – 156 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 31

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3

### Culminating Courses

Select either Residency or Non-Residency Student Teaching and Seminar: 7

#### Residency Student Teaching and Seminar

EDUC 5801 Residency Practicum Capstone

EDUC 5802 Residency Student Teaching Capstone

EDUC 5888 Supervised Teaching

#### Non-Residency Student Teaching and Seminar

EDUC 5409 Research Methods and Induction Capstone

EDUC 5888 Supervised Teaching

**Total Credit Hours** 31

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
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educate@temple.edu  
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#### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

#### Program Coordinator:

Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

#### Teaching and Learning Department Chair:

Dr. Kristie Newton  
KJNewton@temple.edu

## Middle Grades Education/Social Studies MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

## About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
 Spring: November 1  
 Summer II: March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

The official score report must demonstrate a passing score on these two tests:

- Praxis® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- Praxis® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis®* Subject Assessment in their intended content area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis®* PA Grades 4–8 Subject Concentration: Social Studies (5157) – 150 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 31

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3

### Culminating Courses

Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching and Seminar		

EDUC 5409 Research Methods and Induction Capstone

EDUC 5888 Supervised Teaching

**Total Credit Hours** 31

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

### Department Information:

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*Graduate Advising:*

College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*

Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

*Teaching and Learning Department Chair:*

Dr. Kristie Newton  
KJNewton@temple.edu

## Middle Grades Education/Social Studies and Language Arts MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

### About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate

highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

APPLY ONLINE to this graduate program.

**Letters of Reference:**

Number Required: 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

The official score report must demonstrate a passing score on these two tests:

- Praxis® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- Praxis® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis®* Subject Assessment in their intended content area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis®* PA Grades 4–8 Subject Concentration: English Language Arts (5156) – 156 minimum score
- *Praxis®* PA Grades 4–8 Subject Concentration: Social Studies (5157) – 150 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision

about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 31

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during

their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

#### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

#### Program Coordinator:

Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

#### Teaching and Learning Department Chair:

Dr. Kristie Newton  
KJNewton@temple.edu

## Middle Grades Education/Social Studies and Mathematics MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

### About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of

academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

**APPLY ONLINE to this graduate program.**



**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

The official score report must demonstrate a passing score on these two tests:

- Praxis® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- Praxis® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis®* Subject Assessment in their intended content area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis®* PA Grades 4–8 Subject Concentration: Mathematics (5158) – 173 minimum score
- *Praxis®* PA Grades 4–8 Subject Concentration: Social Studies (5157) – 150 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human

Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 31*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis®* PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
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educate@temple.edu  
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#### Program Coordinator:

Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

#### Teaching and Learning Department Chair:

Dr. Kristie Newton  
KJNewton@temple.edu

## Middle Grades Education/Social Studies and Science MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Middle Grades Education.

### About the Program

The Middle Grades Education graduate program prepares students for middle-level teaching in grades 4 to 8. Middle grades teachers are increasingly sought out and in high demand in Pennsylvania and across the country.

The College of Education and Human Development program in Middle Grades Education is designed to ensure that our students graduate highly knowledgeable about learning and teaching as well as committed to pre-adolescent learners from diverse ethnic, economic and geographic backgrounds. The goal is to produce certified teachers to fill the growing vacancies. Toward that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students.

Our program stands out as cutting edge because we prepare graduate students to teach in both upper elementary and middle grades classrooms. In addition to becoming **certified to teach all elementary subjects in grades 4 to 6**, Middle Grades Education students **MUST** pursue **single or dual certification for seventh and eighth grades** in one of the following concentrations:

- Language Arts/English
- Mathematics
- Mathematics and Language Arts/English
- Mathematics and Science
- Science
- Science and Language Arts/English
- Social Studies
- Social Studies and Language Arts/English
- Social Studies and Mathematics
- Social Studies and Science

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most classes are offered to accommodate working adults.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education (PDE).

**Job Prospects:** Graduates typically pursue teaching positions in elementary or middle schools for grades 4 to 8.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all *Praxis*® examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

**APPLY ONLINE** to this graduate program.

### Letters of Reference:

*Number Required:* 2

**From Whom:** Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with children. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

#### Standardized Test Scores:

The official score report must demonstrate a passing score on these two tests:

- Praxis® PA Grades 4-8 Core Assessment: English Language Arts and Social Studies (5154) - 152 minimum score
- Praxis® PA Grades 4-8 Core Assessment: Mathematics and Science (5155) - 164 minimum score

Additionally, to be eligible for certification, all applicants must pass the relevant *Praxis*® Subject Assessment in their intended content area. Although not required, we recommend that applicants pass the subject-area test prior to admission:

- *Praxis*® PA Grades 4–8 Subject Concentration: Social Studies (5157) – 150 minimum score
- *Praxis*® PA Grades 4–8 Subject Concentration: Science (5159) – 156 minimum score

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience

requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 31*

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop	3
MGSE 5196	Reading and Writing in the Middle Grades	3
MGSE 5296	Citizenship, Cultures, and Social Studies Education	3
MGSE 5404	Teaching Math in the Middle Grades	3
MGSE 5405	Teaching Science in the Middle Grades	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5109	Classroom Management and Positive Behavior Support	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this program. Additionally, during their student teaching term, Middle Grades Education students should take the *Praxis*® PA Grades 4-8 Core Assessment (5152) test.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/middle-grades-education-med-ed-mgre-med>

## Department Information:

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1301 Cecil B. Moore Avenue  
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## Submission Address for Application Materials:

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## Department Contacts:

### Admissions:

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educate@temple.edu  
215-204-0999

### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

### Program Coordinator:

Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

### Teaching and Learning Department Chair:

Dr. Kristie Newton  
KJNewton@temple.edu

## Policy and Organizational Studies PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Philosophy in Policy and Organizational Studies.

## About the Program

The PhD in Policy and Organizational Studies is designed to prepare students for research-oriented work in the academy or other settings within the fields of education policy or organizational development. This program is structured to highlight the interdisciplinary nature of the fields and to build on the unique characteristics of Temple University, including its status as a diverse urban institution that emphasizes user-inspired, social justice-oriented, and community-connected scholarship.

The 48-credit post-master's doctoral program includes rigorous study of the theoretical and methodological foundations of Policy and Organizational Studies research combined with a focus on three specialized facets of the policy and organizational fields: Adult and Organizational Development, Higher Education, and Urban Education. The PhD in Policy and Organizational Studies is designed to be completed in four years.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students may matriculate either full- or part-time. Most courses are offered in the evening to accommodate

working professionals. The length of time to complete the doctoral degree program varies depending on the number of courses taken each term.

**Areas of Specialization:** The program offers three areas of concentration:

- **Adult and Organizational Development:** Develop the theoretical knowledge and research methodology to discover or create new protocols or support systems that help adults, teams and organizations develop constructive processes for addressing conflict and adapting to change.
- **Higher Education:** Prepare for senior leadership positions in colleges and universities by developing the doctorate-level expertise to construct new ways to improve institutional effectiveness, college access and success, or student affairs leadership.
- **Urban Education:** Position yourself to break new ground in urban school reform policy and practice by developing deep theoretical understanding of such schools' social context and the precise research methodology needed to uncover new insights.

**Job Prospects:** Graduates are prepared for research-focused careers in academia and other institutions.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** A master's degree in a related field, with some exceptions, is required for admission to the program. Students who have completed a master's degree with at least 30 credits will be designated as admitted with master's degree.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate.

While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Using autobiographical style, explain your interest in pursuing a doctoral degree in education. The statement should address the following questions:

- How have your personal, academic and professional experiences shaped your research interests, and how might a doctoral program in Policy and Organizational Studies help you explore those interests?
- What academic and professional goals would the program help you to achieve upon graduating?
- How does the doctoral program at Temple fit your individual interests, needs and future goals – and which faculty member's research best matches your own interests?

**Standardized Test Scores:**

GRE: Not required, but scores from the general test taken no more than 5 years prior to application may be submitted.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Master's: 48*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5262	Introduction to Qualitative Research	3
EDUC 8402	Policy Analysis	3
EDUC 8403	Understanding Social Science	3
EDUC 8404	Quantitative Analysis, Part I	3
EDUC 8405	Quantitative Analysis, Part II	3
or HIED 8262	Advanced Practice-Based Qualitative Research in Higher Education	3
EDUC 9987	Teaching Apprenticeship	3
EPSY 8627	Introduction to Research Design and Methods	3
<b>Advanced Methods Elective</b>		<b>3</b>

<b>Concentration Courses</b> <sup>1</sup>		<b>18</b>
<b>Research Courses</b> <sup>2</sup>		<b>6</b>
EDUC 9998	Dissertation Proposal Design	
EDUC 9999	Doctor of Education Dissertation	
<b>Total Credit Hours</b>		<b>48</b>

1

See the requirements for each of the 3 PhD concentrations in the course grids below.

2

Of the 6 credits overall, a minimum of 2 credits of EDUC 9999 must be taken.

## Adult and Organizational Development Concentration

Code	Title	Credit Hours
AOD 8101	Training and Organizational Development: Theory and Research	3
EDAD 8775	Understanding Organizational Dynamics in Educational Settings	3
EDUC 9991	Research Apprenticeship	3
Select one from the following:		3
AOD 5402	Negotiating Conflict	
AOD 5404	Organizational Development	
AOD 5516	Negotiation Processes	
AOD 5518	Third-Party Conflict Intervention	
AOD 5527	Training Design and Delivery	
AOD 5533	Team Development	
Select one from the following:		3
HRM 9001	Managing Human Resources	
SOC 5341		
SOC 8111	Classical Social Theory	
SOC 8351		
Elective		3
<b>Total Credit Hours</b>		<b>18</b>

## Higher Education Concentration

Code	Title	Credit Hours
EDUC 9991	Research Apprenticeship	3
HIED 8101	Advanced Seminar on Higher Education Administration	3
HIED 8102	Higher Education Economics and Finance	3
HIED 8103	Equity in Higher Education Policy and Practice	3
HIED 8104	Seminar on Theory in Higher Education and Leadership	3
Elective		3
<b>Total Credit Hours</b>		<b>18</b>

## Urban Education Concentration

Code	Title	Credit Hours
EDUC 9991	Research Apprenticeship	3
URBE 5417	The Urban Environment	3
URBE 5501	Urban Schools	3
URBE 5565	The Origins of Urban Education	3
Elective		3
Theory Elective		3
<b>Total Credit Hours</b>		<b>18</b>

### Culminating Events:

#### *Comprehensive Examination:*

Students are required to complete their comprehensive examination by the end of their second year of doctoral studies. The specific nature of the examination is determined by the concentration selected by the student, but all comprehensive examinations require students to demonstrate proficiency in theory, research methodology, and discipline-specific content.

#### *Proposal with Oral Defense:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. Minimally, the proposal should contain the context and background surrounding a particular research problem; a survey and review of the literature to a sufficient degree to provide the reader with enough information to understand why the research is being conducted; a detailed methodological plan for investigating the problem; and a proposed timeline for completing the dissertation. The Doctoral Advisory Committee must approve the student's proposal, which is presented at a formal proposal defense.

#### *Dissertation with Oral Defense:*

The doctoral dissertation is an original piece of scholarship that makes a significant contribution to the field of Policy and Organizational Studies. A successful dissertation will be publishable in a refereed journal.

The Doctoral Advisory Committee oversees all aspects of the student's dissertation from the proposal to the oral defense. It is composed of three members of the Graduate Faculty. A member of the Policy, Organizational and Leadership Studies faculty typically chairs the committee. At least one faculty member from outside the program must be on the committee. The student chooses their committee in consultation with the selected chair. A student may petition for a change of chairperson or member of the Doctoral Advisory Committee. This petition must be approved by the Department Chair and by the Associate Dean for Academic Affairs and Graduate Studies. Complete details about the dissertation process are available in the College of Education and Human Development Dissertation Handbook, which is available from the Dean's office.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. It is composed of the three members of the Doctoral Advisory Committee plus one additional faculty member, i.e., an outside examiner. One member may be assigned by the Associate Dean for Academic Affairs and Graduate Studies. The Dissertation Examining Committee evaluates the dissertation and the student's ability to defend it. The committee votes to pass or fail the dissertation. The outcome of the defense is determined by majority vote.

Students who are preparing to defend their dissertation must confirm a date and time with the Dissertation Examining Committee. Notification

of the date and time must then be submitted on the appropriate College form to the Associate Dean for Academic Affairs and Graduate Studies no less than 3 weeks prior to the oral defense. The announcement of the oral defense is sent by the Associate Dean to the Graduate School no less than 10 days prior to the defense. A copy of the announcement is also sent to each member of the Dissertation Examining Committee and is posted on the bulletin board in the Office of Student Services of the College of Education and Human Development.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/policy-and-organizational-studies-phd-ed-pos-phd>

### Department Information:

POLS PhD Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### *Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### *Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### *Adult and Organizational Development Concentration Contact:*

Dr. Charles Price  
[charles.price1@temple.edu](mailto:charles.price1@temple.edu)

#### *Higher Education Concentration Contact:*

Dr. Jennifer Johnson  
[jmjohnson@temple.edu](mailto:jmjohnson@temple.edu)

#### *Urban Education Concentration Contact:*

Dr. Maia Cucchiara  
[maia.cucchiara@temple.edu](mailto:maia.cucchiara@temple.edu)

## Professional Health Education MSED

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Science in Education in Professional Health Education.

### About the Program

The Master of Science in Education program in Professional Health Education, with an optional concentration in The Scholarship of

Teaching and Learning in Health-Based Instruction, seeks to provide support to faculty teaching in professional education programs (e.g., Dentistry, Medicine, Pharmacy, Podiatry). In conjunction with faculty and administration from the Kornberg School of Dentistry and the Lewis Katz School of Medicine, faculty from the College of Education and Human Development created a 20-month executive-style program supporting professional faculty who have credentials for the content they teach, but do not have knowledge regarding teaching and learning theories or case-based instruction methods. This program is unique in that it does not solely emphasize instruction and research, but focuses on case-based, evidence-based instruction and clinical care. After completion of all core and concentration courses, students engage in teaching practicum, which is followed by a capstone research project that is presented to faculty and students in the program. An optional concentration is designed to support students interested in the scholarship of teaching and learning in health-based instruction.

Upon completion of the MEd program, students will be able to:

- apply evidence-based healthcare principles to teaching future professionals in their field of study;
- utilize both didactic and clinical adult learning theories when teaching future professionals in their field of study;
- design, present and assess case-based instructional modules within their field of study;
- provide leadership in innovative curricular development, including critiquing curricular change;
- implement effective coaching techniques in their teaching;
- provide effective group facilitation and consultation in their teaching;
- apply current concepts of motivation in education to their teaching; and
- develop a viable study of teaching within their field of study.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online and in-person at the Center City and Main campuses

**Full-Time/Part-Time Status:** The degree program can be completed on a part-time basis.

**Areas of Specialization:** The program can be completed with an optional concentration in The Scholarship of Teaching and Learning in Health-Based Instruction.

**Job Prospects:** Graduates of the MEd program will have enhanced skills that increase their marketability as faculty in healthcare education institutions and institutions of higher learning.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1

*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking the master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 33

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
AOD 5403	Facilitating Adult Learning	3
AOD 5534	Group Facilitation and Consultation	3
EDUC 5501	Fundamental Interpersonal Techniques for Healthcare Professionals	3
EDUC 5502	Case-Based Instruction and Learning	3
EDUC 5503	Professional Issues in Healthcare Education	1
EDUC 8501	Motivation in Education	3
OHSC 8041	Evidence-Based Health Care	2

<b>Concentration Courses</b> <sup>1</sup>	<b>9</b>
<b>Culminating Courses</b>	
EDUC 5504 Professional Health Education Capstone	3
EDUC 5587 Professional Health Education Practicum	3
<b>Total Credit Hours</b>	<b>33</b>

1

Approved courses are delineated in the concentration grids below:

## MSEd with No Concentration

Code	Title	Credit Hours
Select three courses at the 5000 level or higher <sup>1</sup>		9
<b>Total Credit Hours</b>		<b>9</b>

1

Students select their courses in consultation with their academic advisor.

## OR MSEd with Optional Concentration in The Scholarship of Teaching and Learning in Health-Based Instruction

Code	Title	Credit Hours
EDUC 5101	Critical Understanding of Social Science Research	3
EDUC 8404	Quantitative Analysis, Part I	3
EPSY 5529	Tests and Measurements	3
<b>Total Credit Hours</b>		<b>9</b>

### Culminating Events:

#### Practicum:

Students are required to engage in a teaching practicum. In EDUC 5587 Professional Health Education Practicum, students draw on all core content to design a viable study of teaching and learning in their field of study.

#### Capstone:

For EDUC 5504 Professional Health Education Capstone, students write an analysis of the outcomes of the viability study in which they engaged for their practicum and present their analysis to all students and faculty of the program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/professional-health-education-msed-ed-phed-msed>

### Department Information:

Dept. of Psychological Studies in Education  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

#### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

#### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

#### Program Coordinator:

Dr. Paul Jones  
paul.jones@temple.edu

#### Psychological Studies in Education Department Chair:

Dr. Shanta Hattikudur  
shanta@temple.edu

## School Psychology MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

## About the Program

This program is *not open for direct admission*. The Master of Education in School Psychology is awarded to students enrolled in the Education Specialist (EdS) and Doctor of Philosophy (PhD) programs in School Psychology en route to their respective degrees. Students must successfully complete 30 credits of required coursework.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

#### Required Courses:

Code	Title	Credit Hours
ABA 5302	Effective Teaching Strategies and Academic Interventions	3
ABA 5303	Ethical and Legal Issues	3
or SPSY 5303	Ethical and Legal Issues	
EPSY 5561	Development and Learning Over the Lifespan	3
SPSY 5667	Introduction to Cognitive Assessment	3
SPSY 5671	Integrative Assessment	3
SPSY 5674	Social and Emotional Aspects of Behavior and Assessment	3
SPSY 5676	Applied Behavior Analysis	3
SPSY 8773	Developmental Psychopathology and Low Incidence Disabilities	3
SPSY 8777	Theories and Techniques of Counseling for Youth	3
SPSY 9487	Professional Issues and Practicum	3
<b>Total Credit Hours</b>		<b>30</b>



# School Psychology EdS

## COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Education Specialist degree in School Psychology.

### About the Program

The EdS is a rigorous graduate degree program that meets the requirements for certification as a school psychologist in Pennsylvania and New Jersey. Students who apply directly from a bachelor's degree can earn an MEd after completion of 30 credits of qualifying coursework toward the EdS. In addition to required coursework, students must complete a portfolio, required practicum placements, and a 1,200-hour internship in a school setting.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The program is designed to be completed in three years of full-time study, with the third year being a full-time internship.

**Accreditation:** The program is approved by the National Association of School Psychologists and accredited by the Pennsylvania Department of Education.

**Areas of Specialization:** The program offers two optional concentrations for study:

- Applied Behavior Analysis
- Counseling

**Job Prospects:** Graduates are employed in public and private schools.

**Licensure/Certification:** Graduates can become Nationally Certified School Psychologists. Certification in School Psychology is awarded after completing the internship and passing the examinations required by the Commonwealth of Pennsylvania. Some states certify without the examinations.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:* February 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

#### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In two to three pages, indicate your goals and objectives in obtaining a specialist degree and certification as a school psychologist, as well as your reason for seeking certification with a specific focus on the career to which you aspire, your research and practice interests, and your academic and job-related experiences that are relevant to the program.

#### Standardized Test Scores:

GRE: Not required, but scores from the general test taken no more than 5 years prior to application may be submitted. Scores from the GRE Subject Exam in Psychology may also be provided.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Interview:** An interview with the faculty admissions committee may be required after a complete application is received.

**Clearances:** A Pennsylvania criminal background check, a federal criminal history check, a child abuse clearance, and a TB test are required upon enrollment. Students must complete and upload documentation of clearances prior to the start of their program.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

### Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 66 (30 credits MEd; 36 credits post-master's EdS)

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
ABA 5302	Effective Teaching Strategies and Academic Interventions	3
ABA 5303	Ethical and Legal Issues	3

	or SPSY 5303 Ethical and Legal Issues	
CPSY 5526	Multicultural Counseling	3
EDUC 5101	Critical Understanding of Social Science Research	3
EPSY 5561	Development and Learning Over the Lifespan	3
SPSY 5667	Introduction to Cognitive Assessment	3
SPSY 5671	Integrative Assessment	3
SPSY 5674	Social and Emotional Aspects of Behavior and Assessment	3
SPSY 5676	Applied Behavior Analysis	3
SPSY 5771	Biological Aspects of Behavior	3
SPSY 8773	Developmental Psychopathology and Low Incidence Disabilities	3
SPSY 8777	Theories and Techniques of Counseling for Youth	3
SPSY 9551	Consultation	3
<b>Culminating Courses</b>		
SPSY 9487	Professional Issues and Practicum (2 terms)	6
SPSY 9687	Clinical Supervision Seminar in School Psychology	6
SPSY 9688	Psychoeducational Clinic (2 terms)	6
SPSY 9885	Internship in School Psychology	9
<b>Total Credit Hours</b>		<b>66</b>

## Optional Concentration in Applied Behavior Analysis

The optional 12-credit concentration in Applied Behavior Analysis allows students to meet the Behavior Analyst Certification Board's educational requirements to become a Board Certified Behavior Analyst (BCBA):

Code	Title	Credit Hours
ABA 5304	Concepts and Principles of Behavior Analysis	3
ABA 5305	Single Subject Research Design	3
ABA 5306 or PSY 8610	Organizational Behavior Management - OBM Topical Seminar in Organizational-Social	3
ABA 8787	Seminar on Verbal Behavior	3
<b>Total Credit Hours</b>		<b>12</b>

## Optional Concentration in Counseling

The optional 12-credit concentration in Counseling allows students to meet Pennsylvania's educational requirements for licensure as a professional counselor:

Code	Title	Credit Hours
CPSY 5519	Group Counseling	3
CPSY 5566	Professional Issues in Mental Health Counseling	3
CPSY 5593	Career Counseling and Development	3
CPSY 5698	Fundamental Counseling Techniques	3
<b>Total Credit Hours</b>		<b>12</b>

**Internship:** For certification, an internship with a minimum of 1,200 hours in an approved setting must be completed. A minimum of 600 hours must be in a school setting. The internship can be full-time for a year or half-time over two years.

### Culminating Events:

*Comprehensive Examination:*

The comprehensive examination is an essay examination that covers key areas of Psychology and School Psychology to determine the student's competence and ability to explain key concepts. The comprehensive exam is only required for a student whose GPA is below 3.5 at the completion of MEd coursework.

### Portfolio Review:

During the internship year, students must submit a portfolio of professional work for review by the advisor.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/school-psychology-eds-ed-scps-eds>

### Department Information:

Dept. of Psychological Studies in Education  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### Admissions:

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### Graduate Advising:

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### Program Coordinator:

Dr. Jessica Reinhardt  
[reinhardt@temple.edu](mailto:reinhardt@temple.edu)

#### Psychological Studies in Education Department Chair:

Dr. Shanta Hattikudur  
[shanta@temple.edu](mailto:shanta@temple.edu)

## School Psychology PhD

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Doctor of Philosophy in School Psychology.

### About the Program

The School Psychology PhD program follows a scientist-practitioner model, which emphasizes that a school psychologist's basic skills are derived from a thorough understanding of the science of psychology. Armed with this understanding of basic psychology, the school psychologist can adapt to changing professional demands and help determine the future of the profession. Without this background, a psychologist could only serve the role of a technician and would be poorly equipped to overcome any obstacles or lead new developments in the

profession. Students who apply directly from a bachelor's degree can earn an MEd after completion of 30 credits of qualifying coursework toward the PhD.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students must complete one year of full-time residency. The program requires both day and evening classes.

**Accreditation:** The doctoral program in School Psychology is fully accredited by the American Psychological Association (APA), the National Association of School Psychologists (NASP), and the Pennsylvania Department of Education.

**Areas of Specialization:** The program offers an optional concentration in Applied Behavior Analysis.

**Job Prospects:** Graduates are employed in universities, public and private schools, hospitals, research facilities, government and state agencies, and private practice.

**Licensure/Certification:** Certification in School Psychology is awarded after completing the internship and passing the examinations required by the Commonwealth of Pennsylvania. Some states certify without the examinations. Licensing as a psychologist in most states requires an additional post-doctoral year of supervision and passing the Examination for the Professional Practice in Psychology (EPPP) and a state licensure exam.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include assistantships, fellowships, scholarships, tuition remission, graduate student employment, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 1

Applications are accepted for the Fall term only. Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Using autobiographical style, explain your interest in pursuing a doctoral degree in education. The statement should address the following questions:

- Why are interested in becoming a school psychologist?
- What do you perceive as the role and functions of a school psychologist?
- What is your area of research focus?
- How does the doctoral program at Temple fit your individual interests, needs and future goals – and which faculty member's research best matches your own interests?

### Standardized Test Scores:

GRE: Submit scores from the general test taken no more than 5 years prior to application.

GRE Subject Test in Psychology: Optional.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Interview:** An interview with the faculty admissions committee may be required after a complete application is received.

**Writing Sample:** The academic writing sample should be a paper written for a class within the last five years. If a recent paper is not available, the applicant should compose an op-ed piece on an educational issue of their choosing. The op-ed should be 400 to 1,200 words in length and of the kind that might appear in *The New York Times* or *Philadelphia Inquirer*.

**Advanced Standing:** The advisor determines advanced standing during the student's first term in the program by evaluating the credits the student has taken in accordance with the relevance to and requirements of the School Psychology program. Students who have completed a master's degree with at least 30 credits will be designated as admitted with the master's degree; up to 30 credits of the master's degree can be applied toward degree requirements.

**Clearances:** A Pennsylvania criminal background check, a federal criminal history check, a child abuse clearance, and a TB test are required upon enrollment. Students must complete and upload documentation of clearances prior to the start of their program.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 99 for those who complete an internship through the Association of Psychology Postdoctoral and Internship Centers (APPIC); 102 for those who complete a non-APPIC internship

*Number of Credits Required to Earn the Degree with the Concentration in Applied Behavior Analysis:* 105 for those who complete an APPIC internship; 108 for those who complete a non-APPIC internship

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
ABA 5302	Effective Teaching Strategies and Academic Interventions	3
ABA 5303	Ethical and Legal Issues	3
or SPSY 5303	Ethical and Legal Issues	
CPSY 5526	Multicultural Counseling	3
or AOD 5524	Sociocultural Dynamics	
EDUC 8404	Quantitative Analysis, Part I	3
EDUC 8405	Quantitative Analysis, Part II	3
EPSY 5529	Tests and Measurements	3
EPSY 5561	Development and Learning Over the Lifespan	3
EPSY 8627	Introduction to Research Design and Methods	3
SPSY 5667	Introduction to Cognitive Assessment	3
SPSY 5671	Integrative Assessment	3
SPSY 5674	Social and Emotional Aspects of Behavior and Assessment	3
SPSY 5676	Applied Behavior Analysis	3
SPSY 5771	Biological Aspects of Behavior	3
SPSY 8773	Developmental Psychopathology and Low Incidence Disabilities	3
SPSY 8776	History and Systems of Psychology	3
SPSY 8777	Theories and Techniques of Counseling for Youth	3
SPSY 9487	Professional Issues and Practicum (2 terms)	6
SPSY 9488	Advanced Practicum in School Psychology (6 terms)	6
SPSY 9551	Consultation	3
SPSY 9687	Clinical Supervision Seminar in School Psychology	6
SPSY 9688	Psychoeducational Clinic (2 terms)	6
SPSY 9876	Supervision of Psychological Services	3
SPSY 9885	Internship in School Psychology <sup>1</sup>	6-9
Advanced Statistics Course <sup>2</sup>		3
<b>Electives OR Applied Behavior Analysis Concentration Courses</b> 6-12		
<b>Research Courses</b> <sup>4</sup>		
EDUC 9994	Preliminary Examination Preparation	
EDUC 9998	Dissertation Proposal Design	
SPSY 9999	Doctoral Dissertation	
<b>Total Credit Hours</b>		<b>99-108</b>

1

Students who undertake an internship through the Association of Psychology Postdoctoral and Internship Centers (APPIC) complete 6 credits of SPSY 9885, while those who complete a non-APPIC internship must take 9 credits of SPSY 9885.

2

Students select their statistics course in consultation with their academic advisor.

3

If students opt to take electives for a total of 6 credits, they select their two electives in consultation with their academic advisor. If students opt to pursue a concentration in Applied Behavior Analysis, they complete the 12 credits of coursework identified below.

4

Of the 6 credits overall, a minimum of 2 credits of SPSY 9999 must be taken.

## Optional Concentration in Applied Behavior Analysis

The optional 12-credit concentration in Applied Behavior Analysis allows students to meet the Behavior Analyst Certification Board's educational requirements to become a Board Certified Behavior Analyst (BCBA):

Code	Title	Credit Hours
ABA 5304	Concepts and Principles of Behavior Analysis	3
ABA 5305	Single Subject Research Design	3
ABA 5306	Organizational Behavior Management - OBM	3
or PSY 8610	Topical Seminar in Organizational-Social	
ABA 8787	Seminar on Verbal Behavior	3

**Internship:** An internship with a minimum of 1,500 hours must be completed in an approved setting. A minimum of 600 hours must be in a school setting. The internship can be full-time for a year or half-time over two years.

### Culminating Events:

#### Portfolio Review:

During the internship year, students must submit a portfolio of professional work for review by the advisor.

#### Preliminary Examination:

The preliminary examination is an essay examination that covers key areas of Psychology and School Psychology to determine the student's competence and ability to explain key concepts. Four areas are covered:

1. Scientific Psychology
2. Consultation and Intervention
3. Diagnosis and Remediation
4. Role/Function and Ethical/Legal Considerations

The preliminary examination is taken after completion of all academic subjects except for the internship. It is offered over two days, with each section of the examination requiring three hours. The exam is administered and proctored at a time determined by the College of Education and Human Development.

All School Psychology faculty participate in writing the exam by submitting questions and by evaluating the written exam. A passing grade in all four areas is required to pass the exam.

*Proposal with Oral Defense:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. Minimally, the proposal should contain the context and background surrounding a particular research problem; a survey and review of the literature to a sufficient degree to provide the reader with enough information to understand why the research is being conducted; a detailed methodological plan for investigating the problem; and a proposed timeline for completing the dissertation. The Doctoral Advisory Committee must approve the student's proposal, which is presented at a formal proposal defense.

*Internship Evaluation:*

The internship experience is evaluated for successful completion.

*Dissertation with Oral Defense:*

The doctoral dissertation is an original piece of scholarship that makes a significant contribution to the field of School Psychology. A majority of the dissertations in the program are empirical, typically using statistical analysis as the means of completing the data collection process. Other types of scholarship (e.g., those utilizing more qualitative approaches or those employing theoretical or philosophical analysis of educational issues) may be acceptable. A successful dissertation will be publishable in a refereed journal.

The Doctoral Advisory Committee oversees all aspects of the student's dissertation from the proposal to the oral defense. It is composed of three members of the Graduate Faculty. A member of the School Psychology faculty typically chairs the committee. At least one faculty member from outside the program must be on the committee. The student chooses their committee in consultation with the selected chair. A student may petition for a change of chairperson or member of the Doctoral Advisory Committee. This petition must be approved by the Department Chair and by the Associate Dean for Academic Affairs and Graduate Studies. Complete details about the dissertation process are available in the College of Education and Human Development Dissertation Handbook, which is available from the Dean's office.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. It is composed of the three members of the Doctoral Advisory Committee plus one additional faculty member, i.e., an outside examiner. One member may be assigned by the Associate Dean for Academic Affairs and Graduate Studies. The Dissertation Examining Committee evaluates the dissertation and the student's ability to defend it. The committee votes to pass or fail the dissertation. The outcome of the defense is determined by majority vote.

Students who are preparing to defend their dissertation must confirm a date and time with the Dissertation Examining Committee. Notification of the date and time must then be submitted on the appropriate College form to the Associate Dean for Academic Affairs and Graduate Studies no less than 3 weeks prior to the oral defense. The announcement of the oral defense is sent by the Associate Dean to the Graduate School no less than 10 days prior to the defense. A copy of the announcement is also sent to each member of the Dissertation Examining Committee and is posted on the bulletin board in the Office of Student Services of the College of Education and Human Development.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/school-psychology-phd-ed-scps-phd>

### Department Information:

School Psychology Program  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

*Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

*Program Coordinator:*

Dr. Jessica Reinhardt  
[reinhardt@temple.edu](mailto:reinhardt@temple.edu)

*Psychological Studies in Education Department Chair:*

Dr. Shanta Hattikudur  
[shanta@temple.edu](mailto:shanta@temple.edu)

## Secondary Education/English Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Secondary Education.

### About the Program

The Secondary Education graduate program's English Education specialization seeks to prepare teachers to engage secondary students in the production and interpretation of literary and non-literary spoken and written texts. Courses stress connections between the advanced literacy demands of secondary schools and the similarities and differences in the literacies necessary to thrive in home and school communities.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education.

**Job Prospects:** Graduates typically pursue teaching positions in middle and secondary school settings in grades 7 to 12.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all licensure examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with students at the middle- and secondary-grade levels. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31, or 37 with ESL Certification

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5255	Tech in Classrooms: TPCK	3
EDUC 5402	Child and Adol Develop	3
MGSE 5796	Literacy and Differentiation in the Academic Areas, 7-12	3
	or TESL 5613 Multilingual Students' Literacy Development	
SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5666	Introduction to Special Education	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Concentration-Specific Pedagogy Classes</b>		
MGSE 5641	Teaching Written Composition in the Secondary School	3
MGSE 5642	Teaching Literature and Reading in the Secondary School	3
<b>Culminating Courses</b>		
	Select either Residency or Non-Residency Student Teaching and Seminar:	7

## Residency Student Teaching and Seminar

EDUC 5801	Residency Practicum Capstone
EDUC 5802	Residency Student Teaching Capstone
EDUC 5888	Supervised Teaching

## Non-Residency Student Teaching and Seminar

EDUC 5409	Research Methods and Induction Capstone
EDUC 5888	Supervised Teaching

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**Total Credit Hours** **31**

## ESL Certification

While completing the degree, MEd candidates who have elected to complete TESL 5613 Multilingual Students' Literacy Development as a core course may opt to pursue ESL Certification in teaching English as a second language. An additional 6 credits of coursework are required:

Code	Title	Credit Hours
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5621	Contexts for Teaching and Learning Language	3
<b>Total Credit Hours</b>		<b>6</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this MEd program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/secondary-education-med-ed-sece-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*  
Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

*Teaching and Learning Department Chair:*  
Dr. Kristie Newton

KJNewton@temple.edu

# Secondary Education/ Mathematics Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Secondary Education.

## About the Program

The Secondary Education graduate program's Mathematics Education specialization follows the standards and recommendations of leading mathematics professional organizations, such as the National Council of Teachers of Mathematics (NCTM). The curriculum is designed to provide candidates with knowledge of the interests and abilities of students at different levels of mathematics achievement. The program emphasizes problem-solving skills, mathematical thinking processes, and methods of actively engaging children and young adults in their own learning.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The program is approved as a teacher certification preparation program by the Pennsylvania Department of Education.

**Job Prospects:** Graduates typically pursue teaching positions in middle and secondary school settings in grades 7 to 12.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all licensure examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 2*

**From Whom:** Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with students at the middle- and secondary-grade levels. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

**Number of Credits Required Beyond the Baccalaureate:** 31, or 37 with ESL Certification

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5255	Tech in Classrooms: TPCK	3
EDUC 5402	Child and Adol Develop	3
MGSE 5796	Literacy and Differentiation in the Academic Areas, 7-12	3
	or TESL 5613 Multilingual Students' Literacy Development	
SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5666	Introduction to Special Education	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Concentration-Specific Pedagogy Classes</b>		
MGSE 5146	Teaching Science, Technology, Engineering and Math Through Project Based Instruction	3
MGSE 5404	Teaching Math in the Middle Grades	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching and Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

## ESL Certification

While completing the degree, MEd candidates may opt to pursue ESL Certification in teaching English as a second language. An additional 6 credits of coursework are required:

Code	Title	Credit Hours
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5621	Contexts for Teaching and Learning Language	3
<b>Total Credit Hours</b>		<b>6</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this MEd program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/secondary-education-med-ed-sece-med>

### Department Information:

Dept. of Teaching and Learning



College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

### Program Coordinator:

Dr. Tim Fukawa-Connelly  
tim.fc@temple.edu

### Teaching and Learning Department Chair:

Dr. Kristie Newton  
KJNewton@temple.edu

# Secondary Education/Science Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Secondary Education.

## About the Program

The Secondary Education graduate program's Science Education specialization requires a strong foundation in at least one science discipline with supporting expertise in mathematics, as appropriate. Students graduate with an understanding of the nature of science and its complex relationship to the society in which it functions and serves. The program offers concentrations in Biology, Chemistry, Earth Science, General Science and Physics.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The program is approved as a teacher certification preparation program by the Pennsylvania Department of Education.

**Areas of Specialization:** The Science Education specialization of the Secondary Education graduate program offers concentrations in Biology, Chemistry, Earth Science, General Science, and Physics.

**Job Prospects:** Graduates typically pursue teaching positions in middle and secondary school settings in grades 7 to 12.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all required licensure examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with students at the middle- and secondary-grade levels. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31, or 37 with ESL Certification

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5255	Tech in Classrooms: TPCK	3
EDUC 5402	Child and Adol Develop	3
MGSE 5796	Literacy and Differentiation in the Academic Areas, 7-12	3
or TESL 5613	Multilingual Students' Literacy Development	
SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5666	Introduction to Special Education	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Concentration-Specific Pedagogy Courses</b>		
MGSE 5146	Teaching Science, Technology, Engineering and Math Through Project Based Instruction	3
MGSE 5405	Teaching Science in the Middle Grades	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	

Non-Residency Student Teaching and Seminar

EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

## ESL Certification

While completing the degree, MEd candidates may opt to pursue ESL Certification in teaching English as a second language. An additional 6 credits of coursework are required:

Code	Title	Credit Hours
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5621	Contexts for Teaching and Learning Language	3
<b>Total Credit Hours</b>		<b>6</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this MEd program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/secondary-education-med-ed-sece-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

**Admissions:**  
Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

**Graduate Advising:**  
College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

**Program Coordinator:**  
Dr. Tim Fukawa-Connelly  
[tim.fc@temple.edu](mailto:tim.fc@temple.edu)

**Teaching and Learning Department Chair:**  
Dr. Kristie Newton  
[KJNewton@temple.edu](mailto:KJNewton@temple.edu)

## Secondary Education/Social Studies Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Secondary Education.

### About the Program

The Secondary Education graduate program's Social Studies Education specialization aims to develop teachers with the skills necessary to create an informed citizenry with respect for diversity in a democratic society. The Social Studies Education specialization emphasizes critical thinking about social studies curriculum frameworks and materials; curriculum development grounded in teaching for understanding; and sensitivity around controversial areas such as race relations, gender, war and peace, equality of economic and social opportunities, and global interdependence.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The program is approved as a teacher certification preparation program by the Pennsylvania Department of Education.

**Job Prospects:** Graduates typically pursue teaching positions in middle and secondary school settings in grades 7 to 12.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all required licensure examinations, candidates may apply for a Pennsylvania Instructional I Teaching Certificate.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1

*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with students at the middle- and secondary-grade levels. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

The official score report must demonstrate a passing score on the *Praxis*® Social Studies: Content Knowledge (5081) test.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 31, or 37 with ESL Certification

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5255	Tech in Classrooms: TPCCK	3
EDUC 5402	Child and Adol Develop	3
MGSE 5796	Literacy and Differentiation in the Academic Areas, 7-12	3
or TESL 5613	Multilingual Students' Literacy Development	
SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5666	Introduction to Special Education	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Concentration-Specific Pedagogy Classes</b>		
MGSE 5465	Methods and Materials in Secondary Social Studies	3
MGSE 5466	Teaching for Understanding in Secondary Social Studies	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching and Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

## ESL Certification

While completing the degree, MEd candidates may opt to pursue ESL Certification in teaching English as a second language. An additional 6 credits of coursework are required:

Code	Title	Credit Hours
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5621	Contexts for Teaching and Learning Language	3
<b>Total Credit Hours</b>		<b>6</b>

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this MEd program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/secondary-education-med-ed-sece-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### Admissions:

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

#### Graduate Advising:

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

#### Program Coordinator:

Dr. Tim Fukawa-Connelly  
[tim.fc@temple.edu](mailto:tim.fc@temple.edu)

#### Teaching and Learning Department Chair:

Dr. Kristie Newton  
[KJNewton@temple.edu](mailto:KJNewton@temple.edu)

## Secondary Education / World/ Foreign Languages Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Secondary Education.

### About the Program

The Secondary Education graduate program's World/Foreign Languages Education specialization is devoted to providing students with a combination of fluency in the target language and the ability to implement best practices in foreign language pedagogy. This specialization emphasizes that learning a foreign language also means learning about another way of life and developing intercultural understanding in order to escape a narrow cultural perspective. Through the experiences in this program, students gain a deeper understanding of the nature of language and culture.

Although most graduates work in secondary school settings, the need for foreign language teachers in elementary schools, especially for teachers of Spanish, is increasing. In response to this, the World/Foreign Languages Education specialization offers K-12 certification, and the

curriculum is designed to equip students with knowledge and skills they can apply in K-12 settings. Certification is offered in Chinese, French, German, Italian, Latin and Spanish.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The program is approved as a teacher certification program by the Pennsylvania Department of Education.

**Areas of Specialization:** The World/Foreign Languages Education specialization of the Secondary Education graduate program offers certification in Chinese, French, German, Italian, Latin and Spanish.

**Job Prospects:** Graduates typically pursue teaching positions in elementary, middle or secondary school settings in grades K to 12.

**Licensure/Certification:** The program is approved as a teacher certification preparation program by the Pennsylvania Department of Education.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Before being admitted, applicants must have completed an undergraduate major or the equivalent in a subject area (e.g., French, Spanish, etc.) with 36 credits of undergraduate coursework in the subject area:

- Non-native speakers must have taken the first two elementary courses and 10 three-credit courses, with a minimum of 30 credits in the foreign language at the college level, for certification in one foreign language. Work should include courses in composition,

contemporary literature, conversation, culture and civilization, and linguistics.

- Native speakers must have taken eight university courses in the department of the language of certification (e.g., the Spanish Department) and be versed in language, linguistics, literature, and culture.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

The official score report must demonstrate a passing score on the *Praxis*® Fundamental Subjects: Content Knowledge (5511) test and the appropriate language test:

- *Praxis*® Chinese (Mandarin): World Language (5665) test
- *Praxis*® French: World Language (5174) test
- *Praxis*® German: World Language (5183) test
- *Praxis*® Latin (5601) test
- *Praxis*® Spanish: World Language (5195) test

Alternately, the American Council on the Teaching of Foreign Languages (ACTFL) test in the appropriate language may substitute for the *Praxis*® language test. For the ACTFL, both the written and oral exams must be taken, if available. The minimum proficiency to qualify is Intermediate High: Code 120. Candidates may contact the ACTFL testing office at 914-963-7110.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience

requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31, or 37 with ESL Certification

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5255	Tech in Classrooms: TPCK	3
EDUC 5402	Child and Adol Develop	3
MGSE 5796	Literacy and Differentiation in the Academic Areas, 7-12	3
or TESL 5613	Multilingual Students' Literacy Development	
SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5666	Introduction to Special Education	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Concentration-Specific Pedagogy Courses</b>		
MGSE 5427	Curriculum and Methods of Foreign Language Education	3
MGSE 5428	Innovations in Foreign Language Education	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching	
Non-Residency Student Teaching and Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching	
<b>Total Credit Hours</b>		<b>31</b>

## ESL Certification

While completing the degree, MEd candidates may opt to pursue ESL Certification in teaching English as a second language. An additional 6 credits of coursework are required:

Code	Title	Credit Hours
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5621	Contexts for Teaching and Learning Language	3
<b>Total Credit Hours</b>		<b>6</b>

**Language Examination:** Test scores documenting language proficiency need not be provided as they cannot be substituted for academic coursework in the target language.

**Culminating Events:** Student teaching and its related seminar(s) constitute the culminating events for this MEd program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/secondary-education-med-ed-sece-med>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
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**Graduate Advising:**  
College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

**Program Coordinator:**  
Dr. Tim Fukawa-Connelly  
[tim.fc@temple.edu](mailto:tim.fc@temple.edu)

**Teaching and Learning Department Chair:**  
Dr. Kristie Newton  
[KJNewton@temple.edu](mailto:KJNewton@temple.edu)

## Special Education MEd

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Education in Special Education.

### About the Program

The Special Education (SPED) program in the College of Education and Human Development equips teachers with deep understanding of the sociocultural context of education; high-impact instructional practices;

and empirically supported, preventative approaches to provide equitable education to children with disabilities. The program features uphold and further both the College's and the University's mission in the following ways:

- Promoting evidence-based practice and effective implementation in the classroom;
- Recognizing and ameliorating the impact of sociocultural factors on the education of children with disabilities;
- Advocating inclusive practices both within schools and within society as a whole; and
- Emphasizing preventative approaches to support improved teaching and learning.

The Special Education MEd program allows Temple Teacher Residency (TTR) students the ability to complete student teaching across two semesters in a year-long residency. Non-TTR students may complete student teaching in one semester.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main and Online

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 5:30 p.m. The degree program can be completed on a full- or part-time basis.

**Accreditation:** The program is approved as a teacher certification preparation program by the Pennsylvania Department of Education.

**Areas of Specialization:** The scope of the Special Education certificate is grades PreK-8.

**Job Prospects:** The market for highly qualified special education teachers remains unabated. The U.S. Bureau of Labor Statistics reports an increased need for special education teachers. The shortage of special education teachers has been identified regionally (i.e., Pennsylvania and New Jersey) and is particularly prevalent in urban centers in the immediate environs of Temple University.

**Licensure/Certification:** Upon successful completion of the degree requirements and passing all required licensure examinations, candidates may apply for Pennsylvania Special Education PreK-12 certification.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program, if the student is admitted. ***Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.***

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission and other financial aid such as grants, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1  
Summer II: March 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence and should ideally attest to the candidate's academic ability and readiness to work with students at the middle- and secondary-grade levels. References from college/university faculty are recommended.

**Coursework Required for Admission Consideration:** Significant coursework (i.e., the equivalent of a minor or better) and/or professional experience related to the intended certification area are preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** Courses may be transferred from an accredited institution provided they were completed less than five years ago and are relevant to the program. The academic advisor makes the decision about the relevancy of the courses that the student desires to transfer. The maximum number of credits a student may transfer is 6.

**Clearances:** All admitted students must submit copies of the required Pennsylvania criminal background check, FBI criminal history, Child Abuse check, and TB test to the College of Education and Human Development's Office of Field Placement prior to enrolling in their first term. These clearances are required by law prior to entering pre-kindergarten through 12th-grade classrooms to complete field experience requirements, starting with the first term and continuing throughout the program.

Pennsylvania clearances are not required for application completion. All new students who possess required Pennsylvania clearances more than one year old must submit updated clearances to the Office of Field Placement. Please note that obtaining these clearances may take up to

six weeks. For instructions, please visit the Office of Field Placement's website at <https://education.temple.edu/ofp/clearances>.

**Other Requirements:**

1. Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.
2. Upon admission to the Special Education MEd program, students must submit proof from an accredited body of Instructional I Certification, if already earned.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 37

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5402	Child and Adol Develop <sup>1</sup>	3
SPED 5105	Assessment in Special Education	3
SPED 5106	Literacy Instruction for Students with Disabilities	3
SPED 5107	Understanding and Using Special Education Research	3
SPED 5109	Classroom Management and Positive Behavior Support <sup>1</sup>	3
SPED 5201	Students with Moderate to Severe Disabilities: Effective Teaching Strategies	3
SPED 5211	Effective Instruction for Students with Disabilities <sup>1</sup>	3
SPED 5402	Effective Transition Practices for Students with Disabilities	3
SPED 5666	Introduction to Special Education <sup>1</sup>	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners <sup>1</sup>	3
<b>Culminating Courses</b>		
Select either Residency or Non-Residency Student Teaching and Seminar:		7
Residency Student Teaching and Seminar		
EDUC 5801	Residency Practicum Capstone	
EDUC 5802	Residency Student Teaching Capstone	
EDUC 5888	Supervised Teaching <sup>2</sup>	
Non-Residency Student Teaching Seminar		
EDUC 5409	Research Methods and Induction Capstone	
EDUC 5888	Supervised Teaching <sup>2</sup>	
<b>Total Credit Hours</b>		<b>37</b>

<sup>1</sup>

Students who already hold an Instructional I Certification – or who have completed the requirements for initial certification but have not yet applied for certification – have satisfied the competencies of one or more courses required for the Special Education MEd. With documented approval from their advisor, these students may select up to 15 credits of coursework from the list of approved courses below.

<sup>2</sup>

Only students with an Instructional I Certification may reduce their credit hours for EDUC 5888 from 4 to 1 credit and maintain Supervised Teaching. PDE permits a meaningful and modified student teaching experience for students who previously completed a full student teaching experience. Students who opt for this must select an additional 3-credit elective, with documented approval from their advisor, to ensure completion of a total of 37 credits in earning the Special Education MEd.

## Approved Courses for Students Who Have Satisfied Competencies for Instructional I Certification<sup>1</sup>

Code	Title	Credit Hours
ABA 5302	Effective Teaching Strategies and Academic Interventions	3
ABA 5303	Ethical and Legal Issues	3
ABA 5304	Concepts and Principles of Behavior Analysis	3
ABA 5305	Single Subject Research Design	3
ABA 5306	Organizational Behavior Management - OBM	3
ABA 5676	Applied Behavior Analysis	3
ABA 8787	Seminar on Verbal Behavior	3
EDUC 5212	Curriculum, Instruction, and Technology in Education	3
EDUC 5255	Tech in Classrooms: TPACK	3
ILT 5287	ILT: Practicum in Instructional Technology	3
ILT 5499	ILT: Instructional Technology and Learning	3
ILT 5639	Instructional Design and Development	3
SPED 5302	Effective Teaching Strategies and Academic Interventions	3
SPED 9287	Practicum in Special Education	3
TESL 5613	Multilingual Students' Literacy Development	3
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5621	Contexts for Teaching and Learning Language	3

<sup>1</sup>

With documented approval from the student's advisor, other courses may be selected.

**Culminating Events:** Student teaching and satisfactory completion of all coursework is required to earn the Special Education MEd.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/special-education-med-ed-sped-med>

### Department Information:

Dept. of Teaching and Learning  
 College of Education and Human Development  
 1301 Cecil B. Moore Avenue  
 Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
 215-204-0999



## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

### Program Coordinator:

Dr. Jason Travers  
jason.travers@temple.edu

### Teaching and Learning Department Chair:

Dr. Kristie Newton  
KJNewton@temple.edu

## Teaching English to Speakers of Other Languages (TESOL) MEd

### COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the Master of Science in Education in Teaching English to Speakers of Other Languages (TESOL).

## About the Program

The Master of Science in Education program in Teaching English to Speakers of Other Languages (TESOL) is designed for professionals from a variety of backgrounds and with varied career interests. These include:

- Those interested in teaching positions that do not require state certification, including jobs overseas or in business settings, community agencies, college and university English language institutes, and parochial or other independent elementary and secondary schools.
- Those who are already certified to teach in a public school system in Pennsylvania and want to learn how to better meet the needs of English language learners.
- Those from abroad who desire to develop expertise in teaching English in their native country.

Most courses have a mandatory fieldwork component that affords students the opportunity to apply newly learned course concepts and skills to the classroom. Students typically serve as assistant teachers, but if they already have teaching positions, they may complete the fieldwork in their own classrooms. Students who need help finding a fieldwork site receive assistance from their course instructor or from the Office of Field Placement and Professional Experiences.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Job Prospects:** Graduates are prepared to meet the needs of English language learners both stateside and abroad.

**Non-Matriculated Student Policy:** Students may take up to, but not more than, 9 credits of graduate study in the program before being admitted to the program. The credits transfer into the program if the student is admitted. **Students completing non-matriculated courses before being admitted to the program are NOT guaranteed admission.**

**Financing Opportunities:** Financial support opportunities may include scholarships, tuition remission, and other financial aid such as grants, loans and federal work-study.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applicants should submit all required admissions documents by the application deadline to receive priority consideration for admission and financial support.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum GPA of 3.0 on a 4.0 scale is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a 500 to 1,000-word statement of purpose that outlines your interest in seeking a master's degree with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 95
- IELTS Academic: 7.0
- PTE Academic: 64

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
TESL 5611	Applied Language Study I: Phonology and the Lexicon	3
TESL 5612	Applied Language Study II: Grammar, Morphology and Classroom Discourse	3
TESL 5613	Multilingual Students' Literacy Development	3
TESL 5614	Current Approaches to Teaching English Language Learners	3
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5618	Second Language Development	3
TESL 5687	Practicum for Teaching English Language Learners	3
<b>TESOL Electives</b>		
Select two from the following: <sup>1</sup>		6
TESL 5615	Teaching English in a Global Context	
TESL 5621	Contexts for Teaching and Learning Language	
TESL 8625	Applied Linguistics	
TESL 8626	Second Language Writing	
TESL 8634	Bilingualism and Bilingual Education	
TESL 8636	Assessment of English Language Learners	
TESL 8643	Research Methods in Applied Linguistics	
TESL 8644	Current Issues in Applied Linguistics	
<b>Non-TESOL Elective</b> <sup>2</sup>		<b>3</b>
<b>Research Course</b>		
EDUC 9993	Master's Comprehensive Examination	1
<b>Total Credit Hours</b>		<b>31</b>

1

With advisor approval, other appropriate courses may be taken. Students may also choose to take a third TESOL elective, thus requiring no non-TESOL elective.

2

To fulfill this requirement, a course may be taken either within the College of Education and Human Development or in another Temple University school or college. Non-TESOL electives are recommended to be taken in, but are not limited to, such fields as Anthropology, Educational Media, Educational Sociology, English, Foreign Language Education, Linguistics, Literacy, Secondary Education, and Urban Education.

### Culminating Event:

*Comprehensive Examination:*

In order to take the comprehensive exam, the student must remain in good academic standing. Thus, the student cannot accumulate more than

two grades below "B-" or one "F" and must maintain at least a 3.0 grade point average.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/teaching-english-to-speakers-of-other-languages-msed-ed-teso-msed>

### Department Information:

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College of Education and Human Development  
1301 Cecil B. Moore Avenue  
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215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*

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[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

*Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

*Program Coordinator:*

Dr. Di Liu  
[diliu@temple.edu](mailto:diliu@temple.edu)

*Teaching and Learning Department Chair:*

Dr. Kristie Newton  
[KJNewton@temple.edu](mailto:KJNewton@temple.edu)

## Graduate Certificate: Applied Behavior Analysis

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Applied Behavior Analysis.

### About the Certificate

The graduate certificate in Applied Behavior Analysis trains students to apply the principles of learning and behavior to influence behavior change that is significant to society. Students learn how to systematically change behavior by analyzing related environmental variables and applying interventions based on the principles of behavior science. Behavior analysts have improved a wide range of everyday issues, including enhancing staff performance, improving public safety initiatives, teaching effective parenting skills, treating problem behavior in children, improving general and special education teaching strategies, rehabilitating individuals who abuse substances and more.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

**Accreditation:** The certificate program includes a seven-course sequence approved by the Association for Behavior Analysis International (ABAI).

**Job Prospects:** Graduates are prepared for professional careers in a variety of environments, particularly in social service agencies and educational institutions.

**Licensure/Certification:** Coursework may apply toward earning the Behavior Specialist license from the Commonwealth of Pennsylvania.

## Admission Requirements and Deadlines

**Application Deadline:**

Applications are accepted for the Fall and Spring terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Outline your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 21<sup>1</sup>*

*Required Courses:*

Code	Title	Credit Hours
ABA 5302	Effective Teaching Strategies and Academic Interventions	3
ABA 5303	Ethical and Legal Issues	3
ABA 5304	Concepts and Principles of Behavior Analysis	3
ABA 5305	Single Subject Research Design	3
ABA 5306	Organizational Behavior Management - OBM	3
ABA 5676	Applied Behavior Analysis	3
ABA 8787	Seminar on Verbal Behavior	3
<b>Total Credit Hours</b>		<b>21</b>

1

Students who choose to matriculate into the MEd program may transfer up to 12 credits from either this certificate or the Autism Endorsement graduate certificate upon acceptance into the MEd program. Completion of a certificate program does not guarantee admission into the master's program. Students considering matriculating into a master's program are encouraged to apply as early as possible.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/applied-behavior-analysis-certificate-graduate-ed-aba-grad>

### Department Information:

Dept. of Psychological Studies in Education  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

*Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

*Program Coordinator:*

Dr. Jason Travers  
[jason.travers@temple.edu](mailto:jason.travers@temple.edu)

# Graduate Certificate: Autism Endorsement

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Autism Endorsement.

## About the Certificate

Pennsylvania is experiencing a considerable increase in the proportion of students with autism eligible for services. A significant need exists for well-trained professionals holding various Level I and Level II certificates of professional competence to serve students with autism and related Autism Spectrum Disorders (ASD).

The graduate certificate in Autism Endorsement offers a competency-based sequence of courses and a practicum for certified teachers who support students with ASD. All courses are grounded in applied behavior analysis and demonstrate research-based practices that enable students to gain the knowledge, specific skills and competencies to effectively educate children with ASD and work with their families. Students learn from renowned faculty in Temple's College of Education and Human Development, which is consistently ranked among the nation's best by *U.S. News and World Report*. Flexible practicum options are available.

At the conclusion of each course, students may apply for ACT 48 credits.

Completion of the certificate program ensures that graduates enhance their marketability as certified teachers when seeking positions in inclusive settings. Students who successfully complete the program are eligible to receive Pennsylvania's Autism Spectrum Disorders Endorsement Certificate.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main, with convenient night classes offered

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate.

While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

### Other Requirements:

1. Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.
2. A copy of a valid initial teacher certification from any state must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12<sup>1</sup>*

*Required Courses:*

Code	Title	Credit Hours
SPED 5109	Classroom Management and Positive Behavior Support	3
SPED 5201	Students with Moderate to Severe Disabilities: Effective Teaching Strategies	3
SPED 5302	Effective Teaching Strategies and Academic Interventions	3
SPED 9287	Practicum in Special Education	3
<b>Total Credit Hours</b>		<b>12</b>

1

Students who choose to matriculate into the MEd program may transfer up to 12 credits from this certificate upon acceptance into the MEd program. Completion of a certificate program does not guarantee admission into the master's program. Students considering matriculating into a master's program are encouraged to apply as early as possible.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/autism-endorsement-certificate-graduate-ed-aten-grad>

### Department Information:

Dept. of Teaching and Learning

College of Education and Human Development  
 1301 Cecil B. Moore Avenue  
 Philadelphia, PA 19122-6091  
 educate@temple.edu  
 215-204-0999

## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

### Admissions:

Office of Enrollment Management  
 educate@temple.edu  
 215-204-0999

### Graduate Advising:

College of Education and Human Development  
 gradcehd@temple.edu

### Program Coordinator:

Dr. Art Dowdy  
 dowdy@temple.edu

# Graduate Certificate: College Access and Success

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in College Access and Success.

## About the Certificate

The graduate certificate in College Access and Success aims to provide a post-baccalaureate credential that aligns with the primary goals of the MEd program in Higher Education. As the College of Education and Human Development strives to prepare existing and incoming professionals in the ever-changing landscape of higher and postsecondary education, this certificate serves as a critical bridge to helping these service providers develop marketable skills and competencies. Courses offered through this graduate certificate program challenge norms by placing significant emphasis on urban issues and themes of equity, access and affordability in higher and postsecondary education.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
HIED 5103	Access and Equity in Higher Education	3
HIED 5201	Diversity Issues in Higher Education	3
HIED 5202	The Costs of College	3
HIED 5203	Getting into College: Strategic Enrollment Management	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/college-access-and-success-certificate-graduate-ed-cas-grad>

### Department Information:

Department of Policy, Organizational and Leadership Studies  
 College of Education and Human Development  
 1301 Cecil B. Moore Avenue

Philadelphia, PA 19122-6091  
 educate@temple.edu  
 215-204-0999

## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

### Admissions:

Office of Enrollment Management  
 educate@temple.edu  
 215-204-0999

### Graduate Advising:

College of Education and Human Development  
 gradcehd@temple.edu

### Program Coordinator:

Dr. Jennifer M. Johnson  
 jmjohnson@temple.edu

# Graduate Certificate: Conflict Process

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Conflict Process.

## About the Certificate

The graduate certificate in Conflict Process is designed for the professional who works regularly with conflict management and dispute resolution in their profession. Students learn the causes and dynamics of conflict, as well as the variety of approaches for managing conflict. Four required courses focus on conflict theory and practice in organizational, group and community contexts. The program's strong emphasis on integration of theory and practice develops students' knowledge and skills.

**Time Limit for Certificate Completion:** 2 years, although the certificate is designed to be completed within a year

**Campus Location:** Center City (TUCC), with classes offered in the evening and on weekends

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall and Spring terms and are reviewed on a rolling basis.

APPLY ONLINE to this certificate program.

### Letters of Reference:

Number Required: 2

**From Whom:** Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
AOD 5402	Negotiating Conflict	3
AOD 5516	Negotiation Processes	3
AOD 5518	Third-Party Conflict Intervention	3
AOD 5524 or AOD 5533	Sociocultural Dynamics Team Development	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/conflict-process-certificate-graduate-ed-cnfp-grid>

### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
 College of Education and Human Development  
 1301 Cecil B. Moore Avenue  
 Philadelphia, PA 19122-6091  
 educate@temple.edu

215-204-0999

## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

# Graduate Certificate: Data-Driven Decision Making

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Data-Driven Decision Making.

## About the Certificate

Data-driven decision-making refers to the practice of using systematically collected and analyzed information to guide key decisions about policy or practice in business, education, government or other contexts. A growing need exists among organizations of all sorts for employees with knowledge about data-driven decision-making, an important trend in the field and one that complements the expertise of our educational psychology faculty. The graduate certificate program is designed for data users and decision makers from many different kinds of organizations, including schools, colleges, social service groups, nonprofits, government and business.

The success of data-driven decision-making depends on knowing what information to collect, how to collect it, how to analyze it, how to interpret the findings, and how to translate these understandings into subsequent action. Flexible sequencing of courses, potentially flexible modes of course delivery (e.g., face-to-face, hybrid, online), and a culminating paper on a flexible topic allow students in the graduate certificate program to customize training to fit their personal interests.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
EDUC 5101	Critical Understanding of Social Science Research	3
EDUC 5325	Introduction to Statistics and Research	3
EPSY 5523	Introduction to Educational Psychology	3
EPSY 5551	Introduction to Program Evaluation	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/data-driven-decision-making-certificate-graduate-ed-dddm-grad>

### Department Information:

Dept. of Psychological Studies in Education  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu

215-204-0999

## Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

## Department Contacts:

### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

### Program Coordinator:

Dr. Avi Kaplan  
avi.kaplan@temple.edu

# Graduate Certificate: Disability Studies

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Disability Studies.

## About the Certificate

Scholars in the field of Disability Studies recognize the necessity of focusing their work on issues of disability within a traditional discipline, as well as enriching their own understandings by acquiring a familiarity with work on disability in other disciplines. In light of this philosophical reasoning, the graduate certificate in Disability Studies:

- pairs well with graduate study in a variety of disciplines, including bioethics, higher education, occupational therapy, public health, public policy, recreational therapy, social work, special education, and speech-language-hearing;
- draws on resources in a broad array of disciplines from the liberal arts and social sciences to the allied health professions; and
- is interdisciplinary and jointly sponsored by the Institute on Disabilities and the College of Education and Human Development.

The Disability Studies graduate certificate offers a course of study that explores disability from historical, cultural and sociopolitical perspectives. Focus is placed on disability within a social and political context, challenging the notion that the statuses and roles of individuals with disability result from physical or psychological aspects of disability.

The certificate program provides students with an opportunity to reflect critically on practices and approaches that may be taken for granted in their home disciplines. Particular strengths include constituency-oriented research on disability rights and culture, disability and health, disability social policy, ecological aspects of disablement, social history of disability and ableism, and universal design. Students develop a more accurate understanding and appreciation of people with disabilities and the evolution of their civil rights movement.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online, both synchronous and asynchronous

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

**Financing Opportunities:** Students undertaking this certificate in conjunction with a terminal degree program may be eligible for financing and assistantship opportunities. For more information, refer to the Graduate School's financing webpage and/or the Institute on Disabilities' graduate assistantship webpage.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a personal statement indicating your personal and professional interests, plans and objectives within the field of disability studies.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
DSST 5401	Disability Rights and Culture	3
DSST 9489	Field Work in Disability Studies	3
<b>Electives</b>		



Select two from the following:	6
DSST 5402 Action Modes of Research	
DSST 5403 Disability and Social Policy	
DSST 5405 Disability Studies in the Humanities	
<b>Total Credit Hours</b>	<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/disability-studies-certificate-graduate-ed-diss-grad>

### Department Information:

Institute on Disabilities at the College of Education and Human Development

Howard Gittis Student Center, Room 411S

1755 N. 13th Street

Philadelphia, PA 19122-6011

iod@temple.edu

Voice: 215-204-1356

TTY: 1-215-204-1805

### Submission Address for Materials for Applicants Currently Enrolled in a Temple University Graduate Program:

<https://edtemple.tk20.com/campustoolshighered/admissions1.do>

### Submission Address for Materials for Applicants Not Currently Enrolled in a Temple University Graduate Program:

<https://apply.temple.edu/CEHD>

### Department Contacts:

#### Admissions:

Office of Enrollment Management

educate@temple.edu

215-204-0999

#### Graduate Advising:

College of Education and Human Development

gradcehd@temple.edu

#### Graduate Certificate Advisor:

Kate Fialkowski

iod@temple.edu

## Graduate Certificate: Diversity Leadership in Higher Education

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Diversity Leadership in Higher Education.

## About the Certificate

The graduate certificate in Diversity Leadership in Higher Education is designed to provide a broad range of knowledge related to the field of diversity and to create reflective practitioners who can lead and support formal and informal learning collaborations by diverse groups in higher education settings. The broader vision is that certificate holders contribute to the creation of responsible, ethical citizens able to collaborate in an increasingly diverse world.

A sequence of two courses is offered. In the first course, key foundational principles, policies and procedures used in the field of diversity in higher education are introduced. Students learn about the models and theories for developing partnerships and serving as change agents within institutions, as well as strategic planning and assessment of diversity initiatives. In the second course, the student is the facilitator, leading diverse groups in a variety of settings and helping to create self-awareness of their own positionality and attitudes about diversity.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 6*

*Required Courses:*

Code	Title	Credit Hours
HIED 5201	Diversity Issues in Higher Education	3
HIED 5204	Diversity Facilitation and Leadership	3
<b>Total Credit Hours</b>		<b>6</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/diversity-leadership-certificate-graduate-ed-divl-grad>

### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*

Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

*Graduate Advising:*

College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

*Program Coordinator:*

Dr. Jennifer M. Johnson  
[jmjohnson@temple.edu](mailto:jmjohnson@temple.edu)

## Graduate Certificate: English as a Second Language

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in English as a Second Language.

## About the Certificate

The population of English learners has been increasing dramatically across Pennsylvania. This significant growth has led to an increased need for trained ESL teachers. While the ESL graduate certificate is required for individuals to lead ESL classes, it is also strongly recommended for all teachers as Pennsylvania classrooms become increasingly diverse.

In response to the significant need for well-trained ESL and mainstream teachers, Temple's ESL certificate program offers a set of four challenging and practical courses that prepare teachers to work effectively with ESL students. Through this program, students develop a foundation in English usage, linguistic awareness, and second language acquisition. They also learn to adapt and develop instructional materials for ESL students; administer and interpret a variety of formative and summative assessments; become knowledgeable about support services for English language learners; and develop cultural awareness and sensitivity. Because each course includes fieldwork, students have frequent opportunities to teach ESL students throughout the program, immediately applying newly learned concepts and skills. Courses are taught by full-time Temple faculty to ensure students are guided by experts in the field and receive a high-quality education. ESL certificate course credits can also be applied toward Temple University's MSEd in Teaching English to Speakers of Other Languages (TESOL) (p. 264).

The ESL graduate certificate can currently be added to any valid Pennsylvania Instructional I or II teaching certificate. However, to obtain a position as an ESL teacher in a public school, individuals must be certified in Early Childhood Education, Middle Grades English, or Secondary English. To add this credential, students with certificates in other Middle Grades or Secondary content areas should take the *Praxis*® English Language Arts: Content Knowledge (5038).

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

**Application Deadline:**

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

Prospective students should hold an Instructional I or II certificate that is valid in Pennsylvania. Alternatively, students may be accepted if they are matriculated in a certification program at Temple University:

- Undergraduates currently matriculated in a Temple teacher certification program are eligible for the certificate program after achieving candidacy with a minimum GPA of 3.0.
- Graduate students with good academic standing while enrolled in a teacher certification program are also eligible for the certificate program.

Prospective students not currently matriculated in a Temple University teacher certification program must *APPLY ONLINE to this certificate program*.

**Letters of Reference:***Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

Applicants who have taken some TESOL courses, who have experience as an ESL teacher, and/or who participated in ESL-related professional development activities may request a credential review.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirements:**

1. Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.
2. A copy of a valid Pennsylvania Instructional I or II Teaching Certification or evidence of enrollment in a certification program must be submitted.

**Certificate Requirements**

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
TESL 5613	Multilingual Students' Literacy Development	3
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	3
TESL 5621	Contexts for Teaching and Learning Language	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

**Contacts****Certificate Program Web Address:**

<https://www.temple.edu/academics/degree-programs/english-as-a-second-language-certificate-graduate-ed-ensl-grad>

**Department Information:**

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

**Submission Address for Application Materials:**

<https://apply.temple.edu/CEHD>

**Department Contacts:**

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
gradcehd@temple.edu

*ESL Certificate Program Coordinator:*  
Dr. Jill M. Swavely  
jswavely@temple.edu  
215-204-6120

**Graduate Certificate: English Language Teaching**

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in English Language Teaching.

**About the Certificate**

The graduate certificate in English Language Teaching equips students with a foundational understanding of language structure and development as well as strategies for teaching and working with English language learners beyond the K-12 classroom in the United States. Please note that this certificate does not lead to teacher certification and, therefore, is not intended for teacher education students. Teaching English in K-12 classrooms in the United States requires state certification and, in Pennsylvania, a Pennsylvania Program Specialist: ESL Certificate. If you are enrolled in a teacher education program leading toward Pennsylvania Instructional I certification or currently hold that certification, please review the Teaching English to Speakers of Other Languages (TESOL) MSED (p. 264) program.

Grounded in a sociocultural perspective, the program provides firsthand practical experience to build language teaching skills, including lesson planning/delivery, curriculum development and assessment. Upon completion, students find themselves knowledgeable of the cultural, social and political complexities of language education, its learning and use, and are able to skillfully draw on this awareness in a broad range of

international, professional and teaching contexts. This program is ideal for those who want to develop a solid foundation for teaching English to non-native speakers and can serve as a critical pathway to the master's program in Teaching English to Speakers of Other Languages (TESOL).

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 95
- IELTS Academic: 7.0
- PTE Academic: 64

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
TESL 5614	Current Approaches to Teaching English Language Learners	3
TESL 5615	Teaching English in a Global Context	3
<b>TESOL Electives</b>		
<b>6</b>		
Select two from the following:		
TESL 5611	Applied Language Study I: Phonology and the Lexicon	
TESL 5612	Applied Language Study II: Grammar, Morphology and Classroom Discourse	
TESL 5613	Multilingual Students' Literacy Development	
TESL 5616	Designing Assessment and Curriculum for Multilingual Students	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/english-language-teaching-certificate-graduate-ed-eltc-grad>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
[gradcehd@temple.edu](mailto:gradcehd@temple.edu)

*Program Coordinator:*  
Dr. Di Liu  
[diliu@temple.edu](mailto:diliu@temple.edu)

## Graduate Certificate: Institutional Effectiveness

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Institutional Effectiveness.

## About the Certificate

The graduate certificate in Institutional Effectiveness is for students who wish to focus their graduate training on developing skills to support institutional research, data-driven decision-making, and student success analytics. The certificate is particularly timely and relevant, given the focus nationally on increasing the capacity of colleges and universities to advance student success and the rapidly increasing application of predictive analytics within university advising and administration.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
AOD 5535	Organizational Assessment, Design and Strategy	3
EDUC 5325	Introduction to Statistics and Research	3
HIED 5102	Administration of Higher Education	3
HIED 5301	Planning and Assessment in Higher Education	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/institutional-effectiveness-certificate-graduate-ed-inef-grad>

### Department Information:

Department of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*  
Dr. Jennifer M. Johnson  
jmjohnson@temple.edu

## Graduate Certificate: Instructional Learning Technology

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Instructional Learning Technology.

### About the Certificate

Institutions across the nation require educators who understand and can effectively utilize technology in learning environments. The Instructional

Learning Technology certificate program provides students with the expertise and competencies to implement learning strategies through the use of technology. The certificate program is designed for working professionals with diverse professional goals, including:

- Educators in public, charter, independent, parochial and other religiously affiliated institutions.
- Corporate and government trainers and adult educators.
- Faculty and instructional leaders in higher education.

By completing additional coursework to meet state certification requirements, students become eligible to apply for the Instructional Technology Specialist (K-12) certification.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

### Other Requirements:

1. Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.
2. Those who wish to obtain Pennsylvania Instructional Technology Specialist Certification should submit a copy of a valid initial teacher certification from any state.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 15*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EDUC 5212	Curriculum, Instruction, and Technology in Education	3
ILT 5499	ILT: Instructional Technology and Learning	3
ILT 5639	Instructional Design and Development	3
<b>Elective</b>		
Select one from the following:		3
EDUC 5255	Tech in Classrooms: TPACK	
ILT 5232	Technology, Teaching, and Learning	
<b>Practicum</b>		
ILT 5287	ILT: Practicum in Instructional Technology	3
<b>Total Credit Hours</b>		<b>15</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/instructional-learning-technology-certificate-graduate-ed-ilt-grad>

### Department Information:

Dept. of Teaching and Learning  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*  
College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*

Dr. Di Liu  
diliu@temple.edu

## Graduate Certificate: Leadership in Instructional Technology for Higher Education

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Leadership in Instructional Technology for Higher Education.

### About the Certificate

The graduate certificate in Leadership in Instructional Technology for Higher Education aims to provide a post-baccalaureate credential that aligns with the primary goals of the MEd program in Higher Education. As the College of Education and Human Development strives to prepare professionals in the ever-changing landscape of higher and postsecondary education, this certificate serves as a critical bridge to helping prospective leaders develop the vision, marketable skills and competencies that facilitate responsible institutional change in this emergent field. Courses offered through this graduate certificate program prepare candidates to make sound structural and technological decisions regarding effective digitally based learning, teaching and student development.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

### Admission Requirements and Deadlines

#### Application Deadline:

Applications are accepted for the Fall and Spring terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

#### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Write a statement outlining your interest in Instructional Technology Leadership with a specific focus on your interests, your target career, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 6*

*Required Courses:*

Code	Title	Credit Hours
EDUC 8232	Technology, Teaching, and Learning	3
HIED 5502	Digital Education Leadership	3
<b>Total Credit Hours</b>		<b>6</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/instructional-technology-higher-education-certificate-graduate-ed-lith-grad>

#### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

#### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

#### Department Contacts:

##### Admissions:

Office of Enrollment Management  
educate@temple.edu  
215-204-0999

##### Graduate Advising:

College of Education and Human Development  
gradcehd@temple.edu

##### Program Coordinator:

Dr. Jennifer M. Johnson  
jmjohnson@temple.edu

# Graduate Certificate: Professional Health Education

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Professional Health Education.

## About the Certificate

The graduate certificate in Professional Health Education provides initial support to faculty teaching in professional education programs in such disciplines as dentistry, medicine, pharmacy and podiatry. It is designed for health-related professional educators, such as dentists, pharmacists, physicians and scientists who have professional credentials for the content they teach, but do not have knowledge regarding teaching and learning theories or case-based instruction methods.

The Professional Health Education graduate certificate offers coursework focused on adult learners, learning theories and case-based instruction. This is provided through an initial, cohort-based executive model in which courses meet either monthly or fully online, with extensive online support via activities, projects, assignments and assessments.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online and in-person at the Center City and Main campuses

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall term and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Year 1		Credit Hours
Fall		
AOD 5403	Facilitating Adult Learning	3
EDUC 5501	Fundamental Interpersonal Techniques for Healthcare Professionals	3
<b>Credit Hours</b>		<b>6</b>
Spring		Credit Hours
Fall		
AOD 5534	Group Facilitation and Consultation	3
EDUC 5502	Case-Based Instruction and Learning	3
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/professional-health-education-certificate-graduate-ed-phed-grad>

### Department Information:

Dept. of Psychological Studies in Education  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu



215-204-0999

**Graduate Advising:**College of Education and Human Development  
gradcehd@temple.edu**Program Coordinator:**Dr. Paul Jones  
paul.jones@temple.edu

## Graduate Certificate: Student Affairs Leadership

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Student Affairs Leadership.

### About the Certificate

The graduate certificate in Student Affairs Leadership is for students who aspire to serve in administrative roles in student affairs and related areas such as athletics administration, residential life and student activities. Building on course offerings in the MEd in Higher Education program, this certificate deepens students' understanding of and skills in student affairs administration, including focusing on the current leadership contexts and best practices in managing student life and engagement in colleges and universities.

**Time Limit for Certificate Completion:** 2 years**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

### Admission Requirements and Deadlines

**Application Deadline:**

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.***Letters of Reference:***Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** In 500-1,000 words, write a statement of purpose outlining your interest in seeking a graduate certificate with a specific

focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12**Required Courses:*

Code	Title	Credit Hours
CPSY 5698	Fundamental Counseling Techniques	3
HIED 5104	College Students and Development Theory	3
HIED 5201	Diversity Issues in Higher Education	3
HIED 5401	Student Affairs in Higher Education	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/student-affairs-leadership-certificate-graduate-ed-safl-grad>

#### Department Information:

Department of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

#### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

#### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

*Graduate Advising:*

College of Education and Human Development  
gradcehd@temple.edu

*Program Coordinator:*  
Dr. Jennifer M. Johnson  
jmjohnson@temple.edu

## Graduate Certificate: Superintendency

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Superintendency.

### About the Certificate

The graduate certificate in Superintendency is open to individuals who are currently enrolled in Temple's Educational Leadership EdD program and to those who have completed a doctoral degree in Educational Leadership or Organizational Leadership with a concentration in K-12 school leadership at another institution. Completing both this certificate and the related leadership courses for our or another Educational Leadership EdD program fulfill the course of study required by the Pennsylvania Department of Education for the Superintendent PK-12 Letter of Eligibility.

Students in the Superintendency certificate program master:

- the overarching body of knowledge that informs the field of educational leadership and administration and the elements of effective practices in educational leadership;
- analyses of competing perspectives on issues of school and school district leadership as well as critical theory and its implications for leadership practice; and
- knowledge, skills, dispositions, experiences and personal attributes necessary for effective and ethical leadership at the highest levels in school districts and other educational organizations.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

### Admission Requirements and Deadlines

**Application Deadline:**

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant's academic competence. References from college/university faculty are recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

**Statement of Goals:** Outline your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
EDAD 5531	The School Superintendent: Chief Educator and Chief Executive I	3
EDAD 5532	The School Superintendent: Chief Educator and Chief Executive II	3
EDAD 9285	Internship in Administration (Part I)	3
EDAD 9286	Internship in Administration (Part II)	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/superintendency-certificate-graduate-ed-supi-grad>

#### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
educate@temple.edu  
215-204-0999

#### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

#### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
educate@temple.edu  
215-204-0999

## Graduate Certificate: Teaching in Higher Education

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Teaching in Higher Education.

## About the Certificate

The graduate certificate in Teaching in Higher Education has been developed for current faculty members looking to enhance their teaching or advance their career, as well as for high school teachers and professionals in other fields who would like to teach in higher education. Completion of the coursework for the certificate prepares students to:

- appreciate learning-centered teaching;
- apply research on learning and adult development to teaching;
- utilize the principles of integrated course design in developing syllabi, assessments and learning activities;
- use a variety of research-based teaching methods to promote learning, development and achievement of all students;
- practice a reflective, purposeful and learning-centered approach to teaching; and
- independently learn, evaluate and assimilate future research on teaching and learning.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis as part of a cohort. The Fall/Spring cohort takes one course in Fall and the other in Spring. The Summer cohort enrolls in one course in each of the summer sessions (Summer I and Summer II).

## Admission Requirements and Deadlines

### Application Deadline:

To register for the Fall/Spring cohort or the Summer I/Summer II cohort, complete TUCC's registration form.

For questions, contact the Center for the Advancement of Teaching at [thec@temple.edu](mailto:thec@temple.edu) or 215-204-2670.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also be prepared to submit an official document that validates completion and conferral of a degree, diploma and/or certificate.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Other Requirement:** Unofficial undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned are expected to be provided.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 6<sup>1</sup>

*Required Courses:*

Year 1		
Fall		Credit Hours
EPSY 8985	Teaching in Higher Education	3
<b>Credit Hours</b>		<b>3</b>
Spring		
EPSY 8960	Seminar Series: Problems in Educational Psychology <sup>2</sup>	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>6</b>

1

The Plan of Study grid shows the course sequence for the Fall/Spring cohort. Those in the Summer cohort enroll in EPSY 8985 in Summer I and EPSY 8960 in Summer II.

2

The course topic is "Innovation, Technology, and Teaching in Higher Education."

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://teaching.temple.edu/teaching-certificates>

### Department Information:

College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Department Contacts:

#### *Admissions and Registration:*

Continuing Studies  
[tuccadv@temple.edu](mailto:tuccadv@temple.edu)  
215-204-3289

Center for the Advancement of Teaching  
[thec@temple.edu](mailto:thec@temple.edu)  
215-204-2670

## Graduate Certificate: Teaching in Higher Education for the Creative Disciplines

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Teaching in Higher Education for the Creative Disciplines.

## About the Certificate

The graduate certificate in Teaching in Higher Education for the Creative Disciplines is designed to allow faculty who teach in creative disciplines to apply what they have learned in the coursework to the particular needs of their special contexts and consider how they might teach 21st-century students according to the most recent literature on teaching and learning in the arts. The certificate seeks to prepare students for teaching in the creative disciplines at the undergraduate and graduate levels. It is offered by the College of Education and Human Development in collaboration with Temple's Center for the Advancement of Teaching.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis as part of a cohort. The Fall/Spring cohort takes one course in Fall and two in Spring. The Summer cohort enrolls in one course in Summer I and two courses in Summer II.

## Admission Requirements and Deadlines

### Application Deadline:

To register for the Fall/Spring cohort or the Summer I/Summer II cohort, complete TUCC's registration form.

For questions, contact the Center for the Advancement of Teaching at [thec@temple.edu](mailto:thec@temple.edu) or 215-204-2670.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also be prepared to submit an official document that validates completion and conferral of a degree, diploma and/or certificate.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Other Requirement:** Unofficial undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned are expected to be provided.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 9<sup>1</sup>

*Required Courses:*

Year 1		Credit Hours
Fall		
EPSY 8985	Teaching in Higher Education	3
<b>Credit Hours</b>		<b>3</b>

Spring		
ART 8986	Teaching Effectively in the Creative Disciplines <sup>2</sup>	3
EPSY 8960	Seminar Series: Problems in Educational Psychology <sup>3</sup>	3
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>9</b>

1

The Plan of Study grid outlines the course sequence for the Fall/Spring cohort. Students in the Summer cohort enroll in EPSY 8985 in Summer I and ART 8986 and EPSY 8960 in Summer II.

2

ART 8986 Teaching Effectively in the Creative Disciplines is offered through Tyler School of Art and Architecture. This course is cross-listed with similar courses offered by Boyer College of Music and Dance, Lew Klein College of Media and Communication, and the School of Theater, Film and Media Arts.

3

The course topic is "Innovation, Technology and Teaching in Higher Education."

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://teaching.temple.edu/teaching-certificates/teaching-higher-education-certificate-creative-disciplines>

## Department Information:

College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

## Department Contacts:

### Admissions and Registration:

Continuing Studies  
[tuccadv@temple.edu](mailto:tuccadv@temple.edu)  
215-204-3289

Center for the Advancement of Teaching  
[thec@temple.edu](mailto:thec@temple.edu)  
215-204-2670

## Graduate Certificate: Urban Education

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT

Learn more about the graduate certificate in Urban Education.

## About the Certificate

The graduate certificate in Urban Education helps students develop the skills and knowledge necessary to engage in collaborative education-focused work with diverse groups of people in urban settings. Students develop a broad understanding of urban schools and communities,

with a particular emphasis on the social, economic, political and historic factors that shape urban schooling. They also learn to create connections between theory and practice and to move beyond stories of urban school “failure” to analysis of successful policies and approaches.

Students in the Urban Education certificate program seek to provide services in the areas of community development, education, health, youth and advocacy. The program attracts individuals from a wide variety of backgrounds, including educators, parents, community leaders and activists. Through the certificate, students gain knowledge and skills in:

- the history of urban education;
- race, class and schools;
- education policy;
- current trends in school reform; and
- theory, practice and program development related to creating and sustaining partnerships between schools, agencies and communities.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the Office of Enrollment Management for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are accepted for the Fall, Spring and Summer terms and are reviewed on a rolling basis.

*APPLY ONLINE to this certificate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained to provide insight regarding the applicant’s academic competence. References from college/university faculty are recommended.

**Bachelor’s Degree in Discipline/Related Discipline:** A bachelor’s degree is required. A minimum undergraduate GPA of 3.0 is expected.

International applicants should also submit an official document that validates completion and conferral of a degree, diploma and/or certificate. While not required, international applicants are encouraged to submit transcript(s) to the World Education Services (WES) for evaluation.

**Statement of Goals:** Outline your interest in seeking a graduate certificate with a specific focus on the career to which you aspire, your interests, and your academic and job-related experiences that are relevant to the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master’s degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Other Requirement:** Official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned must be submitted.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
URBE 5401	Policy and Practice in Urban Education	3
URBE 5516	School-Community Partnerships in Urban Settings	3
<b>Electives</b>		
Select two from the following:		6
URBE 5417	The Urban Environment	
URBE 5501	Urban Schools	
URBE 5565	The Origins of Urban Education	
URBE 5611	Reforming City Schools	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/urban-education-certificate-graduate-ed-urbe-grad>

### Department Information:

Dept. of Policy, Organizational and Leadership Studies  
College of Education and Human Development  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

### Submission Address for Application Materials:

<https://apply.temple.edu/CEHD>

### Department Contacts:

*Admissions:*  
Office of Enrollment Management  
[educate@temple.edu](mailto:educate@temple.edu)  
215-204-0999

## College of Engineering

Temple University's College of Engineering is committed to its students with an emphasis on education that is hands-on and personal. Classes are small and taught by experienced and dedicated faculty. Fostering an environment for the creation of knowledge, the college encourages basic and cross-disciplinary applied research by its faculty and students. Great importance is attached to scholarship, practice and service aimed at improving the quality of life and the economic viability of our society. These objectives are pursued in a learning environment that celebrates ethnic and gender diversity, respects experience, and encourages problem solving through teamwork.

As part of a research institution, the College of Engineering offers cutting-edge programs that are accredited by the Accreditation Board for Engineering and Technology, Inc. (ABET). The college began as the Evening Technical School in 1936 to accommodate an expanded technical course offering. In 1969, the Board of Trustees approved the formation of the College of Engineering Technology, which was authorized to grant Bachelor of Science degrees in various engineering technology disciplines. In 1986, the college offered the Master of Science in Engineering, its first graduate program.

The mission of the College of Engineering is to provide students with a high-quality, innovative and globally competitive learning experience in engineering, engineering technology and the applied sciences. Engineering graduates are educated professionals with the technical, problem-solving and communication skills required to succeed in the workplace and society. The college has partnerships with some of the area's leading engineering employers. Our graduates are hired by such companies as Boeing, Lockheed Martin, Metrologic, NASA, PennDot, Pannoni Construction, PGW, Turner Construction, Verizon and many more.

## Graduate Programs and Certificates

- Bioengineering MSBioe (p. 286)
- Bioengineering PhD (p. 290)
- Civil Engineering MSCE (p. 293)
- Civil Engineering PhD (p. 297)
- Computer and Systems Security PSM (p. 300)
- Electrical Engineering MSEE (p. 300)
- Electrical Engineering PhD (p. 303)
- Engineering MEng (p. 307)
- Engineering Management MS (p. 309)
- Environmental Engineering MSEnVE (p. 311)
- Environmental Engineering PhD (p. 314)
- Mechanical Engineering MSME (p. 318)
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- Graduate Certificate: Advanced Manufacturing and Robotics (p. 324)
- Graduate Certificate: Computer and Systems Security (p. 325)
- Graduate Certificate: Engineering Management (p. 325)
- Graduate Certificate: Engineering Project Management (p. 326)
- Graduate Certificate: New Product Development (p. 327)
- Graduate Certificate: Stormwater Management (p. 327)

## Graduate Faculty

*Bechara E. Abboud*, Associate Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Drexel University.

*Fauzia Ahmad*, Associate Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, University of Pennsylvania.

*Gangadhar Andaluri*, Assistant Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Temple University.

*Li Bai*, Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, Drexel University.

*Evangelia Bellas*, Assistant Professor, Department of Bioengineering, College of Engineering; PhD, Tufts University.

*Saroj K. Biswas*, Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, University of Ottawa.

*Robert M. Brooks*, Associate Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Indian Institute of Technology.

*Shih-Jiun Chen*, Professor, Department of Mechanical Engineering, College of Engineering; PhD, Drexel University.

*Harsh Deep Chopra*, Professor, Department of Mechanical Engineering, College of Engineering; PhD, University of Maryland College Park.

*Joseph Thomas Coe Jr.*, Associate Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, University of California Los Angeles.

*Richard S. Cohen*, Associate Professor, Department of Mechanical Engineering, College of Engineering; PhD, Princeton University.

*Philip Dames*, Assistant Professor, Department of Mechanical Engineering, College of Engineering; PhD, University of Pennsylvania.

*Kurosh Darvish*, Professor, Department of Mechanical Engineering, College of Engineering; PhD, University of Virginia.

*Zdenka J. Delalic*, Associate Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, University of Pennsylvania.

*Dmitriy A. Dikin*, Research Associate Professor, Department of Mechanical Engineering, College of Engineering; PhD, National Academy of Sciences of Ukraine, Institute for Low Temperature Physics and Engineering.

*Liang Du*, Assistant Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, Georgia Institute of Technology.

*Ahmed Faheem*, Associate Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, University of Wisconsin.

*Bojana Gligorijevic*, Associate Professor, Department of Bioengineering, College of Engineering; PhD, Georgetown University.

*John J. Helferty*, Associate Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, Drexel University.

*Parsaoran Hutapea*, Professor, Department of Mechanical Engineering, College of Engineering; PhD, North Carolina State University.

*Daniel A. Jacobs*, Assistant Professor, Department of Mechanical Engineering, College of Engineering; PhD, Stanford University.

*Mehdi Khanzadeh Moradillo*, Assistant Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Oklahoma State University.

*Mohammad F. Kiani*, Professor, Department of Mechanical Engineering, College of Engineering; PhD, Louisiana Tech University.

*Sanghun Kim*, Associate Professor of Instruction, Department of Civil and Environmental Engineering, College of Engineering; PhD, Syracuse University.

*Peter Lelkes*, Laura H. Carnell Professor, Department of Bioengineering, College of Engineering; PhD, RWTH Aachen University.

*Michel Lemay*, Professor, Department of Bioengineering, College of Engineering; PhD, Case Western Reserve University.

*Haijun Liu*, Associate Professor, Department of Mechanical Engineering, College of Engineering; PhD, University of Maryland College Park.

*Ling Liu*, Associate Professor, Department of Mechanical Engineering, College of Engineering; PhD, Columbia University.

*Erica R. McKenzie*, Associate Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, University of California Davis.

*Iyad Obeid*, Associate Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, Duke University.

*Chetan A. Patil*, Assistant Professor, Department of Bioengineering, College of Engineering; PhD, Vanderbilt University.

*Vallorie J. Peridier*, Associate Professor, Department of Mechanical Engineering, College of Engineering; PhD, Lehigh University.

*Joseph Picone*, Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, Illinois Institute of Technology.

*Alex Pillapakkam*, Associate Professor of Instruction, Department of Mechanical Engineering, College of Engineering; PhD, New Jersey Institute of Technology.

*Nancy Pleshko*, Laura H. Carnell Professor, Department of Bioengineering, College of Engineering; PhD, Rutgers University.

*Fei Ren*, Associate Professor, Department of Mechanical Engineering, College of Engineering; PhD, Michigan State University.

*Robert J. Ryan*, Associate Professor of Instruction, Department of Civil and Environmental Engineering, College of Engineering; PhD, Drexel University.

*Keyanoush Sadeghipour*, Professor, Department of Mechanical Engineering, College of Engineering; PhD, University of Manchester Institute of Science and Technology.

*Elham Sahraei*, Assistant Professor, Department of Mechanical Engineering, College of Engineering; PhD, George Washington University.

*Anita Singh*, Associate Professor, Department of Bioengineering, College of Engineering; PhD, Wayne State University.

*Damoon Soudbakhsh*, Assistant Professor, Department of Mechanical Engineering, College of Engineering; PhD, George Washington University.

*Andrew Spence*, Associate Professor, Department of Bioengineering, College of Engineering; PhD, Cornell University.

*Rominder Suri*, Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Michigan Technological University.

*Rouzbah Tehrani*, Assistant Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Temple University.

*Erkan Tüzel*, Associate Professor, Department of Bioengineering, College of Engineering; PhD, University of Minnesota.

*Philip D. Udo-Inyang*, Associate Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, University of Missouri-Columbia.

*Felix F. Udoeyo*, Associate Professor of Instruction, Department of Civil and Environmental Engineering, College of Engineering; PhD, Abubakar Tafawa Balewa University.

*Karin Wang*, Assistant Professor, Department of Bioengineering, College of Engineering; PhD, Cornell University.

*Chang-Hee Won*, Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, University of Notre Dame.

*Heyang Yuan*, Assistant Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Virginia Polytechnic Institute and State University.

*Yimin Daniel Zhang*, Associate Professor, Department of Electrical and Computer Engineering, College of Engineering; PhD, University of Tsukuba.

*Yichuan Zhu*, Assistant Professor, Department of Civil and Environmental Engineering, College of Engineering; PhD, Texas A and M University.

## Bioengineering MSBioe

### COLLEGE OF ENGINEERING

Learn more about the Master of Science in Bioengineering.

### About the Program

The MSBioe program offers students graduate-level interdisciplinary education and research opportunities in bioengineering and engineering applications in related healthcare fields. The program offers concentrations in Bioelectronics, Biomaterials, and Biomechanics. Graduates of the program are prepared for careers in industry or may choose to pursue a program of study leading to the PhD degree. The program offers research opportunities in collaboration with faculty in

the College of Science and Technology and the Lewis Katz School of Medicine.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main. Students may also take a significant number of required and elective courses at the Health Sciences Center campus.

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary research with other branches of engineering as well as with various departments of the College of Science and Technology and the Lewis Katz School of Medicine.

**Areas of Specialization:** For each of the three areas of specialization, research includes:

- Bioelectronics – sensor development and image analysis
- Biomaterials – wear of ultra-high molecular weight polyethylene, polymer chemistry and interfacial chemistry
- Biomechanics – computer-aided design of composite biomaterials, mechanical properties of orthopedic implant materials, design of orthopedic implants, and modeling of biomaterial behavior

For the MSBioe program, students also choose between three tracks:

1. The Thesis Track is intended for students pursuing advanced research and includes 24 credits of didactic coursework, 3 credits of Project (BIOE 9995), and 3 credits of Thesis (BIOE 9996).
2. The Project Track introduces students to applied research and includes 27 credits of didactic coursework and 3 credits of Project (BIOE 9995).
3. The Coursework Track provides students with an advanced engineering background for their future in the engineering profession through 30 credits of didactic coursework.

In the first term, the student and the Bioengineering (BIO) Graduate Program Director establish a graduate Plan of Study that outlines all required courses and the sequence for the student to follow. This form is used to track the student's progress as the various benchmarks in the program are completed. Once established, any revisions to the Plan of Study require approval in advance. However, if considering whether to change one's track, the student should note that:

- "Thesis" credits (BIOE 9996) can only be applied toward the Thesis MSBioe Track and cannot be applied to either the Project or Coursework Tracks.
- "Project" credits (BIOE 9995) can be applied toward the Thesis and Project MSBioe Tracks but cannot be used for the Coursework Track.

**Job Prospects:** Graduates with the MSBioe degree are employed in a variety of biomedical industries ranging from device manufacturers to design engineering. Other possibilities include careers in government, either in regulatory agencies or with the U.S. Patent and Trademark Office. Students who complete the MSBioe degree with a thesis are prepared to enter a doctoral program.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the MSBioe degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate

coursework to receive an admissions exception. Consequently, the BIO Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the MSBioe program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Three forms of financial aid are offered to graduate students:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual Bioengineering faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's Thesis advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: These highly competitive University-wide grants are typically awarded only to PhD-program applicants.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Late applications may be considered for admission. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

Both admissions and financial aid award decisions originate in the Bioengineering Department. Applicants are encouraged to contact the BIO Graduate Program Director for advice and consultation in the application process.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the BIO Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The Bioengineering Department identifies the needed coursework on a case-by-case basis.



**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree in Bioengineering or a related discipline is the preferred prerequisite degree. However, students who have earned a bachelor's degree in a related field are encouraged to apply, with the understanding that remedial preparatory courses may be a pre-condition of admission to the MSBio program.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The BIO Graduate Program Director helps the applicant navigate the admission possibilities, including the "Non-Matriculated Student Policy" option.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences and career goals in one to two pages.

**Standardized Test Scores:**

GRE: Optional. If reported, scores that are not more than 5 years in advance of the application date are sent to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).)

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits taken at an accredited institution prior to matriculation may be transferred into the MSBio program. In order to transfer, the courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better. The maximum number of credits a student may transfer is 6. (See Graduate School Policy 02.24.21 (p. 18).)

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

## Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOE 5600	Bioengineering Graduate Seminar <sup>1</sup>	0
ENGR 5011	Engineering Mathematics I	3
<b>Specialty Courses</b>		
Select three from the following:		9
BIOL 5312	Biostatistics	
BIOE 5719	Introduction to Bioengineering	
BIOE 5721	Cell Biology for Engineers	
BIOE 5737	Systems Physiology for Engineers	
<b>Electives <sup>2</sup></b>		<b>12</b>
<b>Research Courses</b>		
BIOE 9995	BioEngineering Project Research	3
BIOE 9996	BioEngineering Thesis Research	3
<b>Total Credit Hours</b>		<b>30</b>

1

BIOE 5600 Bioengineering Graduate Seminar is required to be taken each academic term while completing the degree.

2

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of BIOE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

## Project Track

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOE 5600	Bioengineering Graduate Seminar <sup>1</sup>	0
ENGR 5011	Engineering Mathematics I	3
<b>Specialty Courses</b>		
Select three from the following:		9
BIOL 5312	Biostatistics	
BIOE 5719	Introduction to Bioengineering	
BIOE 5721	Cell Biology for Engineers	
BIOE 5737	Systems Physiology for Engineers	
<b>Electives <sup>2</sup></b>		<b>15</b>
<b>Research Course</b>		
BIOE 9995	BioEngineering Project Research	3
<b>Total Credit Hours</b>		<b>30</b>

1

BIOE 5600 Bioengineering Graduate Seminar is required to be taken each academic term while completing the degree.

2

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of BIOE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

## Coursework Track

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOE 5600	Bioengineering Graduate Seminar <sup>1</sup>	0
ENGR 5011	Engineering Mathematics I	3
<b>Specialty Courses</b>		
Select three from the following:		9
BIOL 5312	Biostatistics	
BIOE 5719	Introduction to Bioengineering	
BIOE 5721	Cell Biology for Engineers	
BIOE 5737	Systems Physiology for Engineers	
<b>Electives <sup>2</sup></b>		<b>18</b>
<b>Total Credit Hours</b>		<b>30</b>

1

BIOE 5600 Bioengineering Graduate Seminar is required to be taken each academic term while completing the degree.

2

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of BIOE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

### Culminating Events:

#### Thesis Track:

The culminating events in the Thesis Track are typically undertaken during the last two successive terms of study. Successful completion requires the following:

- Thesis Proposal — BIOE 9995 BioEngineering Project Research (3 credits)  
Under the guidance of the advisor, the student conducts independent research on an applied engineering topic of current interest and registers for BIOE 9995. This work includes the research and preliminary results that form the basis of an extended study that the student plans to carry on in BIOE 9996 BioEngineering Thesis Research in the following term. The student submits a research report as their Thesis Proposal to a committee consisting of three or more faculty members, including the faculty advisor, and presents their proposal in an open College-wide seminar, which is scheduled and posted at least 10 business days in advance of the presentation date. Immediately following the presentation, the student's advisory committee questions the student about the details and strategy of the proposed research. The committee then accepts, accepts with revisions, or rejects the proposal.  
The student must pass the Thesis Proposal before registering for BIOE 9996. If the student fails Thesis Proposal, they may either re-register for BIOE 9995 (1 credit) in the next regular term and repeat

the entire proposal process or consider switching to the Project or Coursework Track. *NOTE: A second failure of Thesis Proposal results in automatic dismissal from the University.* If switching to another track, the Plan of Study form requires updating and appropriate approvals.

- Thesis Defense — BIOE 9996 BioEngineering Thesis Research (3 credits)  
The student should register for BIOE 9996 in the term that they plan to defend the thesis. The thesis document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.26.12.02 (p. 22).) Two weeks prior to the thesis defense, the student provides the committee with a copy of the completed thesis and posts an announcement of the defense, which is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the thesis defense is held, then the defense should take place at least 30 days prior to the end of the term.  
The thesis defense is an open College seminar in which the student presents the concepts and results of their research. Immediately following the defense, the thesis committee convenes to closely examine the student's research and decide to accept the thesis as provided, accept the thesis with revisions, or not accept the thesis. If the thesis is accepted, a letter grade for BIOE 9996 is assigned. If the thesis is accepted with revisions, then the student must submit the revised thesis within 30 days and with the approval of the Thesis Committee. If the thesis is not accepted, but the committee decides to not fail the student, an "R" grade is assigned to BIOE 9996. In the following term, the student registers for one credit of ENGR 9991 Directed Research until they are again prepared to attempt the defense. The defense procedures described above are then carried out again in the term that the student is prepared to defend the thesis.

#### Project Track:

The culminating event for the Project Track is BIOE 9995 BioEngineering Project Research. This entails a one-term research activity done under the supervision of a full-time faculty advisor on an applied engineering topic of interest. Near the end of the term, the student prepares a report of their findings and presents the study in an open departmental seminar. Both the seminar and the written report are used to determine the student's grade for BIOE 9995. The grade is determined jointly by the advisor and another designated grader selected by the Graduate Program Director.

#### Coursework Track:

Successful completion of coursework constitutes the culminating event.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/bioengineering-ms-en-bioe-msbe>

### Department Information:

Bioengineering Department  
ATTN: BIO Programs, College of Engineering  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

## Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

## Department Contacts:

### Admissions:

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

### Graduate Program Director, BIO:

Yah-el Har-el, PhD  
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215-204-3426

### Chairperson, BIO:

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215-204-3307

# Bioengineering PhD

COLLEGE OF ENGINEERING

Learn more about the Doctor of Philosophy in Bioengineering.

## About the Program

The PhD in Bioengineering addresses the needs of an aging population that is likely to require more medical care and to take advantage of the advances in and benefits of biomedical engineering. Employment of biomedical engineers is projected to grow 6 percent from 2020 to 2030, as fast as average for all occupations. The Bioengineering PhD program is designed to educate and train doctoral-level bioengineers to work in academic, medical or industrial settings.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main, Health Sciences Center

**Full-Time/Part-Time Status:** Students are able to complete the didactic portion of the PhD degree program through classes offered after 4:30 p.m.

**Interdisciplinary Study:** Bioengineering research is highly interdisciplinary and draws on collaboration with members of the faculty and students within all departments of the College of Engineering; other departments on Main campus, including Biology and Chemistry; and other schools and colleges at Temple University, such as the Kornberg School of Dentistry, Lewis Katz School of Medicine, and School of Pharmacy.

**Areas of Specialization:** While the Bioengineering PhD is inherently interdisciplinary, the student is admitted to the program and then conducts doctoral research within an area of specialization. These include:

- Biomaterials
- Imaging and optical spectroscopy
- Injury biomechanics
- Neuroengineering
- Neuromechanics of locomotion

- Regenerative tissue engineering
- Stem and cancer cell engineering
- Targeted drug delivery

In the first term, the student and the Bioengineering (BIO) Graduate Program Director jointly initiate a Plan of Study. This form lists all required courses and the program requirement sequence for the student to follow. The Plan of Study is used to track the student's progress, with an annual annotation and update as the student completes various benchmarks in the PhD program.

**Job Prospects:** The program is primarily intended for individuals who wish to pursue careers in industry, government and academia in a highly creative environment. The program is dedicated to producing engineers who will contribute to advancements in biotechnology.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the PhD degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the BIO Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the PhD program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Applicants for full-time study in the Bioengineering PhD program are automatically considered for financial aid. Three forms of financial aid are awarded to PhD students on a competitive basis:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's doctoral advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: Fellowships are awarded by the University in a competitive process that is open to all PhD applicants. The BIO Graduate Program Director nominates exceptional PhD applicants for a University Fellowship. Fellows receive 9 to 12 months of stipend, depending on the award; basic health insurance; and 12 credits of tuition remission each Fall and Spring term. Fellows of the University have no work obligations with respect to either the Department, the College, or the University.

Because financial aid is awarded on a competitive basis, applicants are urged to complete the application as early as possible.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Both admissions and financial aid award decisions originate in the Bioengineering Department within the College of Engineering. Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

#### Letters of Reference:

*Number Required: 3*

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the BIO Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The Bioengineering Department identifies the needed coursework on a case-by-case basis.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The BIO Graduate Program Director helps the applicant navigate the admission possibilities and assists in the assessment of their overall educational qualifications with respect to the departmental requirements for the PhD program.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences, career goals, and specific research interests in one to two pages.

#### Standardized Test Scores:

GRE: Required. Scores that are not more than 5 years in advance of the application date are sent by Educational Testing Service (ETS) to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).) Applicants who require a waiver of the GRE should consult the BIO Graduate Program Director concerning the mechanics and consequences of obtaining an exception.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Advanced Standing:** Both transfer credit for courses taken at another institution while matriculated at Temple and/or advanced standing credit for courses taken within the 5-year period prior to matriculating at Temple may be applied toward the PhD-level didactic coursework requirement. Written approval is required from the student's doctoral advisor, the College's Associate Dean for Graduate Study, and the Graduate School. (See Graduate School Policy 02.24.21 (p. 18).) Up to six credits of advanced standing for courses taken within the 5-year period prior to matriculating at Temple may be used to satisfy the master's-level didactic coursework requirement. Approval of the BIO Graduate Program Director is required. The courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Bachelor's:* 60, including 45 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Number of Credits Required Beyond the Master's:* 30, including 15 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Required Courses:*

### Post-Baccalaureate (for students WITHOUT a master's degree in Bioengineering)

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOE 5600	Bioengineering Graduate Seminar <sup>1</sup>	0
ENGR 5011	Engineering Mathematics I	3
<b>Specialty Courses</b>		
Select three from the following:		9
BIOL 5312	Biostatistics	
BIOE 5719	Introduction to Bioengineering	
BIOE 5721	Cell Biology for Engineers	
BIOE 5737	Systems Physiology for Engineers	
<b>Technical Electives</b> <sup>2</sup>		<b>33</b>
<b>Research Courses</b> <sup>3</sup>		<b>15</b>
BIOE 9991	Directed Research (1-9 credits)	
BIOE 9994	BioEngineering Preliminary Examination Preparation (1-2 credits)	

BIOE 9998	Bioengineering Pre-Dissertation Research (1 credit minimum)	
BIOE 9999	BioEngineering Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>60</b>

1

BIOE 5600 Bioengineering Graduate Seminar is required to be taken each academic term while completing the degree.

2

Students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

3

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of BIOE 9994, a minimum of 1 credit of BIOE 9998, and a minimum of 2 credits of BIOE 9999, with the further stipulation that the minimum number of credits taken in BIOE 9994, BIOE 9998 and BIOE 9999 combined is 6.

## Post-Master's (for students WITH a master's degree in Bioengineering)

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOE 5600	Bioengineering Graduate Seminar <sup>1</sup>	0
ENGR 5011	Engineering Mathematics I	3
<b>Specialty Courses</b>		
Select three from the following:		9
BIOE 5312	Biostatistics	
BIOE 5719	Introduction to Bioengineering	
BIOE 5721	Cell Biology for Engineers	
BIOE 5737	Systems Physiology for Engineers	
<b>Technical Electives <sup>2</sup></b>		<b>3</b>
<b>Research Courses <sup>3</sup></b>		<b>15</b>
BIOE 9991	Directed Research (1-9 credits)	
BIOE 9994	BioEngineering Preliminary Examination Preparation (1-2 credits)	
BIOE 9998	Bioengineering Pre-Dissertation Research (1 credit minimum)	
BIOE 9999	BioEngineering Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>30</b>

1

BIOE 5600 Bioengineering Graduate Seminar is required to be taken each academic term while completing the degree.

2

Students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

3

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of BIOE 9994, a minimum of 1 credit of BIOE 9998, and a minimum of 2 credits of BIOE 9999, with the further stipulation that the minimum number of credits taken in BIOE 9994, BIOE 9998 and BIOE 9999 combined is 6.

### Culminating Events:

#### *Formation of the Doctoral Advisory Committee:*

Selection of a research advisor and formation of a Doctoral Advisory Committee constitute the first steps toward achieving a PhD. Selection of a doctoral advisor depends on the student's level of preparation upon entering the PhD program. The Doctoral Advisory Committee selects the required coursework and guides the progress of the student's dissertation research:

- Students entering the PhD program with a master's degree, i.e., those who must complete 30 credits to earn the degree, form their Doctoral Advisory Committee before the end of their second regular term of study.
- Students entering the program with a bachelor's degree, i.e., those who must complete 60 credits to earn the PhD degree, generally complete most of their coursework before forming their Doctoral Advisory Committee by the end of their fourth regular term in the program.

See Graduate School Policy 02.28.11 (p. 23) for clarification on the composition of the Doctoral Advisory Committee.

#### *Preliminary Examination:*

All students generally complete their didactic coursework prior to taking the preliminary examination. (See Graduate School Policy 02.27.11 (p. 22).) Students in the 30-credit cohort ordinarily take the exam in their third or fourth term. Students in the 60-credit cohort typically take the exam no later than the eighth regular term. Students should register for one credit of BIOE 9994 BioEngineering Preliminary Examination Preparation in the term when the exam will be taken.

The preliminary exam tests both the student's core knowledge in Bioengineering and their capacity to synthesize and interpret research communications. The student coordinates the scheduling of the preliminary exam with the BIO Graduate Program Director. The BIO Graduate Program Director supervises the specific form, content and frequency of the Bioengineering preliminary exam. A maximum of two opportunities to pass the preliminary exam are available to the student. In each term when the exam is attempted, the student registers for one credit of BIOE 9994. Students are dismissed upon the second failure.

#### *Dissertation Proposal:*

Within a year of passing the preliminary exam, the student must develop a written research proposal and present it in an open College seminar. Ten business days prior to the presentation seminar, the student must schedule the proposal and post an announcement. Immediately following the seminar, the Doctoral Advisory Committee questions the student about the details and strategy of their proposed research.

Approval is granted for the proposed dissertation research when the "Dissertation Proposal Transmittal for Elevation to Candidacy" form (found in TUportal under the Tools tab within "University Forms") has been signed off by the entire Doctoral Advisory Committee. After the

dissertation proposal has been accepted by the Doctoral Advisory Committee and the Graduate School has received the form, the student is considered to be a doctoral candidate. (See Graduate School Policy 02.28.12 (p. 23) for more information.)

#### *Research Credits:*

Students carry out research throughout their studies and register for the corresponding research credits while in the PhD program. However, the type of research credits that a student registers for depends on the student's progress in the program:

- Prior to passing the preliminary exam, credit hours associated with the student's research should be registered under BIOE 9991 Directed Research.
- After the preliminary exam is passed, but before elevation to candidacy, credit hours associated with the student's research should be registered under BIOE 9998 Bioengineering Pre-Dissertation Research.
- After elevation to candidacy, the student's research credits should be registered under BIOE 9999 BioEngineering Dissertation Research. Students are required to register for at least three credits of BIOE 9999 following their elevation to candidacy. (See Graduate School Policy 02.28.15 (p. 23).)

#### *Publications:*

Paper writing and presentation at a conference are considered integral to the student's training. Also, peer review, in part, offers an indication of the quality and novelty of the student's research. All doctoral students must publish at least two technical papers in refereed journals or refereed conferences. The papers must be based on the student's dissertation research with the student as the first author.

#### *Dissertation:*

The dissertation defense is an open University seminar in which the student presents the concepts and results of their research.

The student must coordinate the formation of the Dissertation Examining Committee in the term that they intend to defend their dissertation. This committee consists of the original Doctoral Advisory Committee plus one additional "external" member who is not faculty in the College of Engineering. If the external examiner is not a member of Temple University's Graduate Faculty, the person must be approved by the Graduate School at least four weeks prior to the dissertation defense.

The dissertation defense is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the dissertation defense is held, then the defense should take place at least 30 days prior to the end of the term to allow for document revisions.

Three weeks prior to the defense, the members of the committee elect a Chair of the Dissertation Examining Committee. The Chair cannot be the student's doctoral advisor. The Associate Dean of Research and Graduate Studies must approve the selection. The Chair is identified to the Graduate School in the student's official request for permission to schedule the defense. (See Graduate School Policy 02.28.15 (p. 23).) The Chair's role includes coordination of the proceedings of the defense and completion of all relevant College and Graduate School forms concerning the defense.

The dissertation document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.28.18 (p. 23).) A copy of the completed dissertation must be provided to the committee at least three weeks before the date of the dissertation defense. Note that

any Graduate Faculty may request a copy of the dissertation in advance of the defense and may participate in the defense.

A minimum of two weeks prior to the defense, a public announcement of the defense must be posted. Prior to posting, this announcement must be approved in writing by the Graduate School. (See Graduate School Policy 02.28.16 (p. 23).)

Immediately following the presentation, the Dissertation Examining Committee closely examines the student's performance and their research. External attendees may participate in this closed portion of the defense with the permission of the Dissertation Examining Committee Chair. However, only members of the Dissertation Examining Committee may actually vote on the decision to accept the dissertation as prepared, accept the dissertation with revisions, or not accept the dissertation. If the dissertation is accepted with revisions, a revised copy of the dissertation must be submitted and approved by the Committee within 30 days of the original defense date.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/bioengineering-phd-en-bioe-phd>

### Department Information:

College of Engineering  
ATTN: BIO Programs  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*  
Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

*Graduate Program Director, BIO:*  
Yah-el Har-el, PhD  
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215-204-3426

*Chairperson, BIO:*  
Peter Lelkes, PhD  
pilelkes@temple.edu  
215-204-3307

## Civil Engineering MSCE

COLLEGE OF ENGINEERING

Learn more about the Master of Science in Civil Engineering.

## About the Program

The MSCE program is designed to provide students with the opportunity to develop a greater technical competency in the general area of Civil and Environmental Engineering. Students are motivated to grow intellectually through the continued search for and use of knowledge, and are provided with the catalyst to become active, articulate and socially aware individuals. Graduates of the program are key contributors to the civil engineering and environmental engineering professions.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary research with other branches of engineering as well as with various departments in the sciences and applied mathematics. Recent collaborative work with the Department of Mechanical Engineering includes projects on water flow and solute transport in porous media (aquifers) and the effects of turbulence on the mixing of oil spills at sea. Collaboration with the Department of Chemistry includes research on waste combustion products and surface complexation.

**Areas of Specialization:** For each of the two areas of specialization, research includes:

- Civil Engineering Systems – three major branches of civil engineering: construction engineering, structural engineering, and transportation engineering
- Environmental Engineering – the fundamentals and applications of water resources engineering, pollution in natural systems (water and air), and engineered treatment and remediation systems

For the MSCE program, students also choose between three tracks:

1. The Thesis Track is intended for students pursuing advanced research and includes 24 credits of didactic coursework, 3 credits of Project (CEE 9995), and 3 credits of Thesis (CEE 9996).
2. The Project Track introduces students to applied research and includes 27 credits of didactic coursework and 3 credits of Project (CEE 9995).
3. The Coursework Track provides students with an advanced engineering background for their future in the engineering profession through 30 credits of didactic coursework.

In the first term, the student and the Civil and Environmental Engineering (CEE) Graduate Program Director establish a graduate Plan of Study that outlines all required courses and the sequence for the student to follow. This form is used to track the student's progress as the various benchmarks in the program are completed. Once established, any revisions to the Plan of Study require approval in advance. However, if considering whether to change one's track, the student should note that:

- "Thesis" credits (CEE 9996) can only be applied toward the Thesis MSCE Track and cannot be applied to either the Project or Coursework Tracks.
- "Project" credits (CEE 9995) can be applied toward the Thesis and Project MSCE Tracks but cannot be used for the Coursework Track.

**Job Prospects:** Graduates with the MSCE are employed by various engineering companies as well as government agencies in design,

analysis and applications. Typical examples are water treatment facilities and regulatory agencies engaged in environmental regulation and pollution control; companies involved in construction project management; and those involved in structural design and analysis of buildings, bridges and other structures. Students who complete an MSCE with a thesis are prepared to enter a doctoral program.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the MSCE degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the CEE Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the MSCE program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Three forms of financial aid are offered to graduate students:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual CEE faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's Thesis advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: These highly competitive University-wide grants are typically awarded only to PhD-program applicants.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Late applications may be considered for admission. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

Both admissions and financial aid award decisions originate in the Department of Civil and Environmental Engineering (CEE). Applicants are encouraged to contact the CEE Graduate Program Director for advice and consultation in the application process.

**Letters of Reference:**

*Number Required:* 3

**From Whom:** Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the CEE Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The CEE Department identifies the needed coursework on a case-by-case basis.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree in Civil Engineering is the preferred prerequisite degree. However, students who have earned a bachelor's degree in a related field are encouraged to apply, with the understanding that remedial preparatory courses may be a pre-condition of admission to the MSCE program.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The CEE Graduate Program Director helps the applicant navigate the admission possibilities, including the "Non-Matriculated Student Policy" option.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences and career goals in one to two pages.

**Standardized Test Scores:**

GRE: Optional. If reported, scores that are not more than 5 years in advance of the application date are sent to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).)

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits taken at an accredited institution prior to matriculation may be transferred into the MSCE program. In order to transfer, the courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or

better. The maximum number of credits a student may transfer is 6. (See Graduate School Policy 02.24.21 (p. 18).)

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

### Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
Select three from the following:		9
CEE 5212	Transportation Engineering Materials	
CEE 5241	Pavement Management and Traffic Systems Management	
CEE 5431	Behavior and Design of Steel Structures	
CEE 5434	Behavior and Design of Reinforced Concrete Structures	
CEE 5821	Foundation Engineering	
CEE 5822	Earth Retaining Systems	
<b>Electives</b> <sup>1</sup>		15
<b>Research Courses</b>		
CEE 9995	Project	3
CEE 9996	Thesis	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

### Project Track

Code	Title	Credit Hours
<b>Core Courses</b>		
Select three from the following:		9
CEE 5212	Transportation Engineering Materials	
CEE 5241	Pavement Management and Traffic Systems Management	
CEE 5431	Behavior and Design of Steel Structures	
CEE 5434	Behavior and Design of Reinforced Concrete Structures	
CEE 5821	Foundation Engineering	
CEE 5822	Earth Retaining Systems	
<b>Electives</b> <sup>1</sup>		18
<b>Research Course</b>		
CEE 9995	Project	3
<b>Total Credit Hours</b>		<b>30</b>



1

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

## Coursework Track

Code	Title	Credit Hours
<b>Core Courses</b>		
Select three from the following:		9
CEE 5212	Transportation Engineering Materials	
CEE 5241	Pavement Management and Traffic Systems Management	
CEE 5431	Behavior and Design of Steel Structures	
CEE 5434	Behavior and Design of Reinforced Concrete Structures	
CEE 5821	Foundation Engineering	
CEE 5822	Earth Retaining Systems	
<b>Electives</b> <sup>1</sup>		<b>21</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

### Culminating Events:

#### Thesis Track:

The culminating events in the Thesis Track are typically undertaken during the last two successive terms of study. Successful completion requires the following:

- Thesis Proposal — CEE 9995 Project (3 credits)  
Under the guidance of the advisor, the student conducts independent research on an applied engineering topic of current interest and registers for CEE 9995. This work includes the research and preliminary results that form the basis of an extended study that the student plans to carry on in CEE 9996 Thesis in the following term. The student submits a research report as their Thesis Proposal to a committee consisting of three or more faculty members, including the faculty advisor, and presents their proposal in an open College-wide seminar, which is scheduled and posted at least 10 business days in advance of the presentation date. Immediately following the presentation, the student's advisory committee questions the student about the details and strategy of the proposed research. The committee then accepts, accepts with revisions, or rejects the proposal.  
The student must pass the Thesis Proposal before registering for CEE 9996. If the student fails Thesis Proposal, they may either re-register for CEE 9995 (1 credit) in the next regular term and repeat the entire proposal process or consider switching to the Project or Coursework Track. *NOTE: A second failure of Thesis Proposal results in automatic dismissal from the University.* If switching

to another track, the Plan of Study form requires updating and appropriate approvals.

- Thesis Defense — CEE 9996 Thesis (3 credits)  
The student should register for CEE 9996 in the term that they plan to defend the thesis. The thesis document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.26.12.02 (p. 22).) Two weeks prior to the thesis defense, the student provides the committee with a copy of the completed thesis and posts an announcement of the defense, which is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the thesis defense is held, then the defense should take place at least 30 days prior to the end of the term.  
The thesis defense is an open College seminar in which the student presents the concepts and results of their research. Immediately following the defense, the thesis committee convenes to closely examine the student's research and decide to accept the thesis as provided, accept the thesis with revisions, or not accept the thesis. If the thesis is accepted, a letter grade for CEE 9996 is assigned. If the thesis is accepted with revisions, then the student must submit the revised thesis within 30 days and with the approval of the Thesis Committee. If the thesis is not accepted, but the committee decides to not fail the student, an "R" grade is assigned to CEE 9996. In the following term, the student registers for one credit of ENGR 9991 Directed Research until they are again prepared to attempt the defense. The defense procedures described above are then carried out again in the term that the student is prepared to defend the thesis.

#### Project Track:

The culminating event for the Project Track is CEE 9995 Project. This entails a one-term research activity done under the supervision of a full-time faculty advisor on an applied engineering topic of interest. Near the end of the term, the student prepares a report of their findings and presents the study in an open departmental seminar. Both the seminar and the written report are used to determine the student's grade for CEE 9995. The grade is determined jointly by the advisor and another designated grader selected by the Graduate Program Director.

#### Coursework Track:

Successful completion of coursework constitutes the culminating event.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/civil-engineering-ms-en-cee-msce>

### Department Information:

Dept. of Civil and Environmental Engineering  
ATTN: CEE Programs, College of Engineering  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
[gradengr@temple.edu](mailto:gradengr@temple.edu)  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

## Department Contacts:

### Admissions:

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

### Graduate Program Director, CEE:

Joseph Coe, PhD  
joseph.coe@temple.edu  
215-204-6100

### Chairperson, CEE:

Rominder Suri, PhD  
rsuri@temple.edu  
215-204-2378

## Civil Engineering PhD

### COLLEGE OF ENGINEERING

Learn more about the Doctor of Philosophy in Civil Engineering.

## About the Program

The PhD in Civil Engineering is designed to produce graduates who have:

- built a solid core knowledge base in science, technology, civil engineering and mathematics;
- gained the ability to adapt to interdisciplinary research projects and employ emerging technology;
- learned how to plan, develop and conduct a research project on their own as future principal investigators; and
- mastered professional oral and written communication skills.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students are able to complete the didactic portion of the PhD degree program through classes offered after 4:30 p.m.

**Interdisciplinary Study:** Research in Civil Engineering is interdisciplinary and requires collaboration of members of the faculty and students in the Department of Electrical and Computer Engineering, Department of Mechanical Engineering, Mathematics Department, and various science departments at Temple University.

**Areas of Specialization:** Faculty in the Department of Civil and Environmental Engineering are actively engaged in research in the following areas of Civil Engineering:

- Construction management
- Geophysical imaging and site characterization
- Instrumentation and sensor technology
- Pavement design and rehabilitation
- Scour countermeasures for bridges
- Transportation engineering

In the first term, the student and the Civil and Environmental Engineering (CEE) Graduate Program Director jointly initiate a Plan of Study. This form lists all required courses and the program requirement

sequence for the student to follow. The Plan of Study is used to track the student's progress, with an annual annotation and update as the student completes various benchmarks in the PhD program.

**Job Prospects:** The program is primarily intended for individuals who wish to pursue careers in industry, government and academia in a highly creative environment. The program is dedicated to producing engineers who will contribute to advancements in civil engineering.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the PhD degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the CEE Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the PhD program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Applicants for full-time study in the Civil Engineering PhD program are automatically considered for financial aid. Three forms of financial aid are awarded to PhD students on a competitive basis:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's doctoral advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: Fellowships are awarded by the University in a competitive process that is open to all PhD applicants. The CEE Graduate Program Director nominates exceptional PhD applicants for a University Fellowship. Fellows receive 9 to 12 months of stipend, depending on the award; basic health insurance; and 12 credits of tuition remission each Fall and Spring term. Fellows of the University have no work obligations with respect to either the Department, the College, or the University.

Because financial aid is awarded on a competitive basis, applicants are urged to complete the application as early as possible.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Both admissions and financial aid award decisions originate in the Department of Civil and Environmental Engineering within the College

of Engineering. Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the CEE Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The Department of Civil and Environmental Engineering identifies the needed coursework on a case-by-case basis.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The CEE Graduate Program Director helps the applicant navigate the admission possibilities and assists in the assessment of their overall educational qualifications with respect to the departmental requirements for the PhD program.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences, career goals, and specific research interests in one to two pages, ensuring that you have clearly identified your area of interest within the field of civil and environmental engineering.

**Standardized Test Scores:**

GRE: Required. Scores that are not more than 5 years in advance of the application date are sent by Educational Testing Service (ETS) to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).) Applicants who require a waiver of the GRE should consult the CEE Graduate Program Director concerning the mechanics and consequences of obtaining an exception.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the

testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Advanced Standing:** Both transfer credit for courses taken at another institution while matriculated at Temple and/or advanced standing credit for courses taken within the 5-year period prior to matriculating at Temple may be applied toward the PhD-level didactic coursework requirement. Written approval is required from the student's doctoral advisor, the College's Associate Dean for Graduate Study, and the Graduate School. (See Graduate School Policy 02.24.21 (p. 18).) Up to six credits of advanced standing for courses taken within the 5-year period prior to matriculating at Temple may be used to satisfy the master's-level didactic coursework requirement. Approval of the CEE Graduate Program Director is required. The courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Bachelor's:* 60, including 45 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Number of Credits Required Beyond the Master's:* 30, including 15 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Required Courses:*

### Post-Baccalaureate (for students WITHOUT a master's degree in Civil Engineering)

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		<b>45</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
CEE 9991	Directed Research (1-9 credits)	
CEE 9994	Preliminary Examination Preparation (1-2 credits)	
CEE 9998	Pre-Dissertation Research (1 credit minimum)	
CEE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>60</b>

<sup>1</sup>

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of CEE 9182 Independent Study I, 3 credits of CEE 9282 Independent Study II, or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of CEE 9994, a minimum of 1 credit of CEE 9998, and a minimum of 2 credits of CEE 9999, with the further stipulation that the minimum number of credits taken in CEE 9994, CEE 9998 and CEE 9999 combined is 6.

## Post-Master's (for students WITH a master's degree in Civil Engineering)

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		<b>15</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
CEE 9991	Directed Research (1-9 credits)	
CEE 9994	Preliminary Examination Preparation (1-2 credits)	
CEE 9998	Pre-Dissertation Research (1 credit minimum)	
CEE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of CEE 9182 Independent Study I, 3 credits of CEE 9282 Independent Study II, or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of CEE 9994, a minimum of 1 credit of CEE 9998, and a minimum of 2 credits of CEE 9999, with the further stipulation that the minimum number of credits taken in CEE 9994, CEE 9998 and CEE 9999 combined is 6.

### Culminating Events:

#### *Formation of the Doctoral Advisory Committee:*

Selection of a research advisor and formation of a Doctoral Advisory Committee constitute the first steps toward achieving a PhD. Selection of a doctoral advisor depends on the student's level of preparation upon entering the PhD program. The Doctoral Advisory Committee selects the required coursework and guides the progress of the student's dissertation research:

- Students entering the PhD program with a master's degree, i.e., those who must complete 30 credits to earn the degree, form their Doctoral Advisory Committee before the end of their second regular term of study.
- Students entering the program with a bachelor's degree, i.e., those who must complete 60 credits to earn the PhD degree, generally complete most of their coursework before forming their Doctoral Advisory Committee by the end of their fourth regular term in the program.

See Graduate School Policy 02.28.11 (p. 23) for clarification on the composition of the Doctoral Advisory Committee.

#### *Preliminary Examination:*

All students generally complete their didactic coursework prior to taking the preliminary examination. (See Graduate School Policy 02.27.11 (p. 22).) Students in the 30-credit cohort ordinarily take the exam in their third or fourth term. Students in the 60-credit cohort typically take the exam no later than the eighth regular term. Students should register for one credit of CEE 9994 Preliminary Examination Preparation in the term when the exam will be taken.

The preliminary exam tests both the student's core knowledge in Civil Engineering and their capacity to synthesize and interpret research communications. The student coordinates the scheduling of the preliminary exam with the CEE Graduate Program Director. The CEE Graduate Program Director supervises the specific form, content and frequency of the Civil Engineering preliminary exam. A maximum of two opportunities to pass the preliminary exam are available to the student. In each term when the exam is attempted, the student registers for one credit of CEE 9994. Students are dismissed upon the second failure.

#### *Dissertation Proposal:*

Within a year of passing the preliminary exam, the student must develop a written research proposal and present it in an open College seminar. Ten business days prior to the presentation seminar, the student must schedule the proposal and post an announcement. Immediately following the seminar, the Doctoral Advisory Committee questions the student about the details and strategy of their proposed research.

Approval is granted for the proposed dissertation research when the "Dissertation Proposal Transmittal for Elevation to Candidacy" form (found in TUportal under the Tools tab within "University Forms") has been signed off by the entire Doctoral Advisory Committee. After the dissertation proposal has been accepted by the Doctoral Advisory Committee and the Graduate School has received the form, the student is considered to be a doctoral candidate. (See Graduate School Policy 02.28.12 (p. 23) for more information.)

#### *Research Credits:*

Students carry out research throughout their studies and register for the corresponding research credits while in the PhD program. However, the type of research credits that a student registers for depends on the student's progress in the program:

- Prior to passing the preliminary exam, credit hours associated with the student's research should be registered under CEE 9991 Directed Research.
- After the preliminary exam is passed, but before elevation to candidacy, credit hours associated with the student's research should be registered under CEE 9998 Pre-Dissertation Research.
- After elevation to candidacy, the student's research credits should be registered under CEE 9999 Dissertation Research. Students are required to register for at least three credits of CEE 9999 following their elevation to candidacy. (See Graduate School Policy 02.28.15 (p. 23).)

#### *Publications:*

Paper writing and presentation at a conference are considered integral to the student's training. Also, peer review, in part, offers an indication of the quality and novelty of the student's research. All doctoral students must publish at least two technical papers in refereed journals or refereed

conferences. The papers must be based on the student's dissertation research with the student as the first author.

#### *Dissertation:*

The dissertation defense is an open University seminar in which the student presents the concepts and results of their research.

The student must coordinate the formation of the Dissertation Examining Committee in the term that they intend to defend their dissertation. This committee consists of the original Doctoral Advisory Committee plus one additional "external" member who is not faculty in the College of Engineering. If the external examiner is not a member of Temple University's Graduate Faculty, the person must be approved by the Graduate School at least four weeks prior to the dissertation defense.

The dissertation defense is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the dissertation defense is held, then the defense should take place at least 30 days prior to the end of the term to allow for document revisions.

Three weeks prior to the defense, the members of the committee elect a Chair of the Dissertation Examining Committee. The Chair cannot be the student's doctoral advisor. The Associate Dean of Research and Graduate Studies must approve the selection. The Chair is identified to the Graduate School in the student's official request for permission to schedule the defense. (See Graduate School Policy 02.28.15 (p. 23).) The Chair's role includes coordination of the proceedings of the defense and completion of all relevant College and Graduate School forms concerning the defense.

The dissertation document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.28.18 (p. 23).) A copy of the completed dissertation must be provided to the committee at least three weeks before the date of the dissertation defense. Note that any Graduate Faculty may request a copy of the dissertation in advance of the defense and may participate in the defense.

A minimum of two weeks prior to the defense, a public announcement of the defense must be posted. Prior to posting, this announcement must be approved in writing by the Graduate School. (See Graduate School Policy 02.28.16 (p. 23).)

Immediately following the presentation, the Dissertation Examining Committee closely examines the student's performance and their research. External attendees may participate in this closed portion of the defense with the permission of the Dissertation Examining Committee Chair. However, only members of the Dissertation Examining Committee may actually vote on the decision to accept the dissertation as prepared, accept the dissertation with revisions, or not accept the dissertation. If the dissertation is accepted with revisions, a revised copy of the dissertation must be submitted and approved by the Committee within 30 days of the original defense date.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/civil-engineering-phd-en-cee-phd>

### Department Information:

College of Engineering  
ATTN: CEE Programs

1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

## Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

## Department Contacts:

#### *Admissions:*

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

#### *Graduate Program Director, CEE:*

Joseph Coe, PhD  
joseph.coe@temple.edu  
215-204-6100

#### *Chairperson, CEE:*

Rominder Suri, PhD  
rsuri@temple.edu  
215-204-2378

## Computer and Systems Security PSM

COLLEGE OF ENGINEERING

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Electrical Engineering MSEE

COLLEGE OF ENGINEERING

Learn more about the Master of Science in Electrical Engineering.

### About the Program

The MSEE program offers students practice-oriented graduate-level education in Electrical and Computer Engineering. Concentrations include Computer Architectures and Microelectronics, Digital Signal Processing and Digital Data Communication, and Intelligent Systems and Control. Current active research projects in the department include embedded systems and system-on-chip design, intelligent interactive tutoring systems, intrusion detection, multisensor fusion, speaker identification, speech processing, and visualization and fault detection in multicasting networks. Other active areas of research include digital signal processing, heat dissipation problems in microchips, human-computer interaction, intelligent multimedia systems, robust and optimal control, and wireless data networks.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary research with other branches of engineering as well as with various departments in the sciences and applied mathematics. Recent collaborative work with the Department of Computer and Information Sciences includes visualization and fault detection in multicasting networks and image processing.

**Areas of Specialization:** For each of the three areas of specialization, research includes:

- Computer Architectures and Microelectronics – current practices of computer design and development; hardware realization and integrated circuit layout; MOS-integrated circuit design for high-speed digital computation and data communication; and software-level testing
- Digital Signal Processing and Digital Data Communication – array signal processing; detection of faults in communication networks; detection of multidimensional signals in the presence of noise; filtering and modulation; intrusion detection, visualization and security of multicast networks; multisensor data fusion; performance evaluation of local area and wireless networks, broadband networks and protocols; speaker identification; and voice signal processing
- Intelligent Systems and Control – intelligent tutoring systems, interactive multimedia, neuro-fuzzy control, and robust and optimal control

For the MSEE program, students also choose between three tracks:

1. The Thesis Track is intended for students pursuing advanced research and includes 24 credits of didactic coursework, 3 credits of Project (ECE 9995), and 3 credits of Thesis (ECE 9996).
2. The Project Track introduces students to applied research and includes 27 credits of didactic coursework and 3 credits of Project (ECE 9995).
3. The Coursework Track provides students with an advanced engineering background for their future in the engineering profession through 30 credits of didactic coursework.

In the first term, the student and the Electrical and Computer Engineering (ECE) Graduate Program Director establish a graduate Plan of Study that outlines all required courses and the sequence for the student to follow. This form is used to track the student's progress as the various benchmarks in the program are completed. Once established, any revisions to the Plan of Study require approval in advance. However, if considering whether to change one's track, the student should note that:

- "Thesis" credits (ECE 9996) can only be applied toward the Thesis MSEE Track and cannot be applied to either the Project or Coursework Tracks.
- "Project" credits (ECE 9995) can be applied toward the Thesis and Project MSEE Tracks but cannot be used for the Coursework Track.

**Job Prospects:** Graduates with the MSEE are employed in high-tech industries and government laboratories with responsibilities for design, analysis and applications of electrical engineering principles. Students who complete an MSEE with a thesis are prepared to enter a doctoral program.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the MSEE degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the ECE Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the MSEE program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Three forms of financial aid are offered to graduate students:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual ECE faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's Thesis advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: These highly competitive University-wide grants are typically awarded only to PhD-program applicants.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Late applications may be considered for admission. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

Both admissions and financial aid award decisions originate in the Department of Electrical and Computer Engineering (ECE). Applicants are encouraged to contact the ECE Graduate Program Director for advice and consultation in the application process.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic

reference letters appear impractical should contact the ECE Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The ECE Department identifies the needed coursework on a case-by-case basis.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree in Electrical Engineering or Computer Engineering is the preferred prerequisite degree. However, students who have earned a bachelor's degree in a related field are encouraged to apply, with the understanding that remedial preparatory courses may be a pre-condition of admission to the MSEE program.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The ECE Graduate Program Director helps the applicant navigate the admission possibilities, including the "Non-Matriculated Student Policy" option.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences and career goals in one to two pages.

**Standardized Test Scores:**

GRE: Optional. If reported, scores that are not more than 5 years in advance of the application date are sent to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).)

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits taken at an accredited institution prior to matriculation may be transferred into the MSEE program. In order to transfer, the courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better. The maximum number of credits a student may transfer is 6. (See Graduate School Policy 02.24.21 (p. 18).)

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

### Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
ECE 5022	Engineering Analysis and Applications	3
ECE 5033	Probability and Random Processes	3
ECE 5600	Graduate Seminar	0
<b>Electives<sup>1</sup></b>		<b>18</b>
<b>Research Courses</b>		
ECE 9995	Project	3
ECE 9996	Thesis	3
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of ECE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

### Project Track

Code	Title	Credit Hours
<b>Core Courses</b>		
ECE 5022	Engineering Analysis and Applications	3
ECE 5033	Probability and Random Processes	3
ECE 5600	Graduate Seminar	0
<b>Electives<sup>1</sup></b>		<b>21</b>
<b>Research Course</b>		
ECE 9995	Project	3
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of ECE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

### Coursework Track

Code	Title	Credit Hours
<b>Core Courses</b>		
ECE 5022	Engineering Analysis and Applications	3
ECE 5033	Probability and Random Processes	3
ECE 5600	Graduate Seminar	0
<b>Electives<sup>1</sup></b>		<b>24</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of ECE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

### **Culminating Events:**

#### *Thesis Track:*

The culminating events in the Thesis Track are typically undertaken during the last two successive terms of study. Successful completion requires the following:

- **Thesis Proposal — ECE 9995 Project (3 credits)**  
Under the guidance of the advisor, the student conducts independent research on an applied engineering topic of current interest and registers for ECE 9995. This work includes the research and preliminary results that form the basis of an extended study that the student plans to carry on in ECE 9996 Thesis in the following term. The student submits a research report as their Thesis Proposal to a committee consisting of three or more faculty members, including the faculty advisor, and presents their proposal in an open College-wide seminar, which is scheduled and posted at least 10 business days in advance of the presentation date. Immediately following the presentation, the student's advisory committee questions the student about the details and strategy of the proposed research. The committee then accepts, accepts with revisions, or rejects the proposal.  
The student must pass the Thesis Proposal before registering for ECE 9996. If the student fails Thesis Proposal, they may either re-register for ECE 9995 (1 credit) in the next regular term and repeat the entire proposal process or consider switching to the Project or Coursework Track. *NOTE: A second failure of Thesis Proposal results in automatic dismissal from the University.* If switching to another track, the Plan of Study form requires updating and appropriate approvals.
- **Thesis Defense — ECE 9996 Thesis (3 credits)**  
The student should register for ECE 9996 in the term that they plan to defend the thesis. The thesis document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.26.12.02 (p. 22).) Two weeks prior to the thesis defense, the student provides the committee with a copy of the completed thesis and posts an announcement of the defense, which is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the thesis defense is held, then the defense should take place at least 30 days prior to the end of the term.  
The thesis defense is an open College seminar in which the student presents the concepts and results of their research. Immediately following the defense, the thesis committee convenes to closely examine the student's research and decide to accept the thesis as provided, accept the thesis with revisions, or not accept the thesis. If the thesis is accepted, a letter grade for ECE 9996 is assigned. If the thesis is accepted with revisions, then the student must submit the revised thesis within 30 days and with the approval of the Thesis Committee. If the thesis is not accepted, but the committee decides to not fail the student, an "R" grade is assigned to ECE 9996. In the following term, the student registers for one credit of ENGR 9991 Directed Research until they are again prepared to attempt the

defense. The defense procedures described above are then carried out again in the term that the student is prepared to defend the thesis.

#### *Project Track:*

The culminating event for the Project Track is ECE 9995 Project. This entails a one-term research activity done under the supervision of a full-time faculty advisor on an applied engineering topic of interest. Near the end of the term, the student prepares a report of their findings and presents the study in an open departmental seminar. Both the seminar and the written report are used to determine the student's grade for ECE 9995. The grade is determined jointly by the advisor and another designated grader selected by the Graduate Program Director.

#### *Coursework Track:*

Successful completion of coursework constitutes the culminating event.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/electrical-engineering-ms-en-ece-msee>

### **Department Information:**

Dept. of Electrical and Computer Engineering  
ATTN: ECE Programs, College of Engineering  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
[gradengr@temple.edu](mailto:gradengr@temple.edu)  
215-204-7800

### **Submission Address for Application Materials:**

<https://apply.temple.edu/ENGINEERING/Account/Login>

### **Department Contacts:**

#### *Admissions:*

Elizabeth Jung  
[elizabeth.jung@temple.edu](mailto:elizabeth.jung@temple.edu)  
215-204-7800

#### *Graduate Program Director, ECE:*

Iyad Obeid, PhD  
[iobeid@temple.edu](mailto:iobeid@temple.edu)  
215-204-9033

#### *Chairperson, ECE:*

Li Bai, PhD  
[lbai@temple.edu](mailto:lbai@temple.edu)  
215-204-6616

## **Electrical Engineering PhD**

COLLEGE OF ENGINEERING

Learn more about the Doctor of Philosophy in Electrical Engineering.

### **About the Program**

The PhD in Electrical Engineering is designed to develop electrical engineers who have a clear understanding of the importance of electrical engineering. Doctoral students are prepared to identify a research area in electrical engineering and analyze the literature, develop theory, perform



experimentation, and develop their own methodologically rigorous research studies. Students complete their studies with a mastery of the fundamental critical thinking and analytic skills and competencies necessary for electrical and computer engineering. Graduates are well prepared to enter the workforce in a range of engineering companies, universities, research organizations, federal agencies and nonprofit organizations.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students are able to complete the didactic portion of the PhD degree program through classes offered after 4:30 p.m.

**Interdisciplinary Study:** Engineering research is highly interdisciplinary and draws on collaboration with members of the faculty and students within all departments of the College of Engineering, in the Mathematics Department and departments engaged in the study of the physical sciences, and at the Lewis Katz School of Medicine at Temple University.

**Areas of Specialization:** The areas of specialization within the Electrical Engineering PhD include:

- Cyber physical systems
- Digital data communication and network
- Digital signal processing and digital image processing
- Microelectronics and computer architectures
- Signal processing and speech processing
- Smart systems and control

In the first term, the student and the Electrical and Computer Engineering (ECE) Graduate Program Director jointly initiate a Plan of Study. This form lists all required courses and the program requirement sequence for the student to follow. The Plan of Study is used to track the student's progress, with an annual annotation and update as the student completes various benchmarks in the PhD program.

**Job Prospects:** The program is primarily intended for individuals who wish to pursue careers in industry, government and academia in a highly creative environment. The program is dedicated to producing engineers who will contribute to advancements in electrical engineering. In the past, most graduates with the PhD in Electrical Engineering were employed in high-tech industries in research and development positions.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the PhD degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the ECE Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the PhD program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Applicants for full-time study in the Electrical Engineering PhD program are automatically considered for financial aid. Three forms of financial aid are awarded to PhD students on a competitive basis:

1. **Teaching Assistantship (TA):** TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. **Research Assistantship (RA):** Individual faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's doctoral advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. **Fellowships:** Fellowships are awarded by the University in a competitive process that is open to all PhD applicants. The ECE Graduate Program Director nominates exceptional PhD applicants for a University Fellowship. Fellows receive 9 to 12 months of stipend, depending on the award; basic health insurance; and 12 credits of tuition remission each Fall and Spring term. Fellows of the University have no work obligations with respect to either the Department, the College, or the University.

Because financial aid is awarded on a competitive basis, applicants are urged to complete the application as early as possible.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Both admissions and financial aid award decisions originate in the Department of Electrical and Computer Engineering within the College of Engineering. Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the ECE Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The Department of Electrical and Computer Engineering identifies the needed coursework on a case-by-case basis.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The ECE Graduate Program Director helps the applicant navigate the admission possibilities and assists in the assessment of their overall educational qualifications with respect to the departmental requirements for the PhD program.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences, career goals, and specific research interests in one to two pages.

#### Standardized Test Scores:

GRE: Required. Scores that are not more than 5 years in advance of the application date are sent by Educational Testing Service (ETS) to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).) Applicants who require a waiver of the GRE should consult the ECE Graduate Program Director concerning the mechanics and consequences of obtaining an exception.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Advanced Standing:** Both transfer credit for courses taken at another institution while matriculated at Temple and/or advanced standing credit for courses taken within the 5-year period prior to matriculating at Temple may be applied toward the PhD-level didactic coursework requirement. Written approval is required from the student's doctoral advisor, the College's Associate Dean for Graduate Study, and the Graduate School. (See Graduate School Policy 02.24.21 (p. 18).) Up to six credits of advanced standing for courses taken within the 5-year period prior to matriculating at Temple may be used to satisfy the master's-level didactic coursework requirement. Approval of the ECE Graduate Program Director is required. The courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Bachelor's:* 60, including 45 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Number of Credits Required Beyond the Master's:* 30, including 15 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Required Courses:*

### Post-Baccalaureate (for students WITHOUT a master's degree in Electrical Engineering)

Code	Title	Credit Hours
<b>Required Seminar</b>		
ECE 5600	Graduate Seminar	0
<b>Core Courses</b> <sup>1</sup>		<b>45</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
ECE 9991	Directed Research (1-9 credits)	
ECE 9994	Preliminary Examination Preparation (1-2 credits)	
ECE 9998	Pre-Dissertation Research (1 credit minimum)	
ECE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>60</b>

1

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of ECE 9182 Independent Study I, 3 credits of ECE 9282 Independent Study II, or 3 credits of ECE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of ECE 9994, a minimum of 1 credit of ECE 9998, and a minimum of 2 credits of ECE 9999, with the further stipulation that the minimum number of credits taken in ECE 9994, ECE 9998 and ECE 9999 combined is 6.

### Post-Master's (for students WITH a master's degree in Electrical Engineering)

Code	Title	Credit Hours
<b>Required Seminar</b>		
ECE 5600	Graduate Seminar	0
<b>Core Courses</b> <sup>1</sup>		<b>15</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
ECE 9991	Directed Research (1-9 credits)	
ECE 9994	Preliminary Examination Preparation (1-2 credits)	
ECE 9998	Pre-Dissertation Research (1 credit minimum)	
ECE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of ECE 9182 Independent Study I, 3 credits of ECE 9282 Independent Study II, or 3 credits of ECE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of ECE 9994, a minimum of 1 credit of ECE 9998, and a minimum of 2 credits of ECE 9999, with the further stipulation that the minimum number of credits taken in ECE 9994, ECE 9998 and ECE 9999 combined is 6.

### **Culminating Events:**

#### *Formation of the Doctoral Advisory Committee:*

Selection of a research advisor and formation of a Doctoral Advisory Committee constitute the first steps toward achieving a PhD. Selection of a doctoral advisor depends on the student's level of preparation upon entering the PhD program. The Doctoral Advisory Committee selects the required coursework and guides the progress of the student's dissertation research:

- Students entering the PhD program with a master's degree, i.e., those who must complete 30 credits to earn the degree, form their Doctoral Advisory Committee before the end of their second regular term of study.
- Students entering the program with a bachelor's degree, i.e., those who must complete 60 credits to earn the PhD degree, generally complete most of their coursework before forming their Doctoral Advisory Committee by the end of their fourth regular term in the program.

See Graduate School Policy 02.28.11 (p. 23) for clarification on the composition of the Doctoral Advisory Committee.

#### *Preliminary Examination:*

All students generally complete their didactic coursework prior to taking the preliminary examination. (See Graduate School Policy 02.27.11 (p. 22).) Students in the 30-credit cohort ordinarily take the exam in their third or fourth term. Students in the 60-credit cohort typically take the exam no later than the eighth regular term. Students should register for one credit of ECE 9994 Preliminary Examination Preparation in the term when the exam will be taken.

The preliminary exam tests both the student's core knowledge in Electrical Engineering and their capacity to synthesize and interpret research communications. The student coordinates the scheduling of the preliminary exam with the ECE Graduate Program Director. The ECE Graduate Program Director supervises the specific form, content and frequency of the Electrical Engineering preliminary exam. A maximum of two opportunities to pass the preliminary exam are available to the student. In each term when the exam is attempted, the student registers for one credit of ECE 9994. Students are dismissed upon the second failure.

#### *Dissertation Proposal:*

Within a year of passing the preliminary exam, the student must develop a written research proposal and present it in an open College seminar. Ten business days prior to the presentation seminar, the student must schedule the proposal and post an announcement. Immediately following the seminar, the Doctoral Advisory Committee questions the student about the details and strategy of their proposed research.

Approval is granted for the proposed dissertation research when the "Dissertation Proposal Transmittal for Elevation to Candidacy" form (found in TUportal under the Tools tab within "University Forms") has been signed off by the entire Doctoral Advisory Committee. After the dissertation proposal has been accepted by the Doctoral Advisory Committee and the Graduate School has received the form, the student is considered to be a doctoral candidate. (See Graduate School Policy 02.28.12 (p. 23) for more information.)

#### *Research Credits:*

Students carry out research throughout their studies and register for the corresponding research credits while in the PhD program. However, the type of research credits that a student registers for depends on the student's progress in the program:

- Prior to passing the preliminary exam, credit hours associated with the student's research should be registered under ECE 9991 Directed Research.
- After the preliminary exam is passed, but before elevation to candidacy, credit hours associated with the student's research should be registered under ECE 9998 Pre-Dissertation Research.
- After elevation to candidacy, the student's research credits should be registered under ECE 9999 Dissertation Research. Students are required to register for at least three credits of ECE 9999 following their elevation to candidacy. (See Graduate School Policy 02.28.15 (p. 23).)

#### *Publications:*

Paper writing and presentation at a conference are considered integral to the student's training. Also, peer review, in part, offers an indication of the quality and novelty of the student's research. All doctoral students must publish at least two technical papers in refereed journals or refereed conferences. The papers must be based on the student's dissertation research with the student as the first author.

#### *Dissertation:*

The dissertation defense is an open University seminar in which the student presents the concepts and results of their research.

The student must coordinate the formation of the Dissertation Examining Committee in the term that they intend to defend their dissertation. This committee consists of the original Doctoral Advisory Committee plus one additional "external" member who is not faculty in the College of Engineering. If the external examiner is not a member of Temple University's Graduate Faculty, the person must be approved by the Graduate School at least four weeks prior to the dissertation defense.

The dissertation defense is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the dissertation defense is held, then the defense should take place at least 30 days prior to the end of the term to allow for document revisions.

Three weeks prior to the defense, the members of the committee elect a Chair of the Dissertation Examining Committee. The Chair cannot be the student's doctoral advisor. The Associate Dean of Research and Graduate Studies must approve the selection. The Chair is identified to

the Graduate School in the student's official request for permission to schedule the defense. (See Graduate School Policy 02.28.15 (p. 23).) The Chair's role includes coordination of the proceedings of the defense and completion of all relevant College and Graduate School forms concerning the defense.

The dissertation document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.28.18 (p. 23).) A copy of the completed dissertation must be provided to the committee at least three weeks before the date of the dissertation defense. Note that any Graduate Faculty may request a copy of the dissertation in advance of the defense and may participate in the defense.

A minimum of two weeks prior to the defense, a public announcement of the defense must be posted. Prior to posting, this announcement must be approved in writing by the Graduate School. (See Graduate School Policy 02.28.16 (p. 23).)

Immediately following the presentation, the Dissertation Examining Committee closely examines the student's performance and their research. External attendees may participate in this closed portion of the defense with the permission of the Dissertation Examining Committee Chair. However, only members of the Dissertation Examining Committee may actually vote on the decision to accept the dissertation as prepared, accept the dissertation with revisions, or not accept the dissertation. If the dissertation is accepted with revisions, a revised copy of the dissertation must be submitted and approved by the Committee within 30 days of the original defense date.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/electrical-engineering-phd-en-ece-phd>

### Department Information:

College of Engineering  
ATTN: ECE Programs  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*  
Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

*Graduate Program Director, ECE:*  
Iyad Obeid, PhD  
iobeid@temple.edu  
215-204-9033

*Chairperson, ECE:*  
Li Bai, PhD  
lbai@temple.edu

215-204-6616

## Engineering MEng

COLLEGE OF ENGINEERING

Learn more about the Master of Engineering.

### About the Program

The Master of Engineering (MEng) degree program is designed for engineers who make their career in the engineering field and look to advance as either technical specialists and project supervisors or to move into management or sales positions. A strong skilled workforce is in very high demand as the skills gap widens in the field of engineering. Skilled engineers that can participate across disciplines are needed as industries evolve.

The MEng degree allows engineering students to achieve the unique set of technical skills required by their specialty or the business skills needed for leadership that cannot be gained through undergraduate engineering education alone. Innovation in the delivery of graduate engineering education that allows for flexibility and customization is revolutionizing post-baccalaureate education for engineers by meeting the needs of the evolving industry and fostering the management skills engineers need to innovate and lead.

The MEng degree enables students to select three graduate certificates of 9 credits each in specialized areas of engineering in accordance with their interests, combining the specialties to engage in a unique combination of cross-disciplinary training. To earn the degree, the three certificates are "stacked" along with an integrative capstone project proposed by the student. Graduates of the program emerge with technical expertise in their field as well as the leadership and business acumen required to advance in their organizations.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online, with a mix of synchronous and asynchronous courses until all courses are asynchronous

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The degree program is inherently interdisciplinary in its design.

**Non-Matriculated Student Policy:** Students with an undergraduate GPA of 3.0 or higher may be allowed to take classes on a non-matriculated basis. Non-matriculated students may take a maximum of 9 credits. Any additional courses require the student to be matriculated in a program.

**Financing Opportunities:** For more information, contact the Department of Engineering, Technology and Management in the College of Engineering.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Late applications may be considered for admission. Ordinarily, the applicant is informed of an

admissions decision within 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 3*

*From Whom:* Recommendations should be professional references from supervisors and co-workers or academic references. References should be obtained from those who know the applicant well and who can attest to the applicant's ability to excel in the MEng program.

**Coursework Required for Admission Consideration:** Two years' relevant work experience in a company is preferred, but exceptions can be made.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in a STEM field is required, with a minimum GPA of 3.0 having been attained.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** An essay on your professional plans and goals should be one to three pages in length. It should reflect your influences, values, aspirations and interest in the MEng program. The following questions may be addressed:

- What particular past experiences or previous exposure (academic, professional, etc.) prepared or motivated you to pursue the MEng degree?
- How would you expect to change over the course of the program?
- What personal and professional values and skills do you hope to acquire through the academic content?
- How will obtaining the MEng degree support your career objectives or potential career path(s)?
- Given the importance of teamwork and collaboration in business, what are the most significant strengths or contributions you bring to a team?

**Standardized Test Scores:**

GRE: Optional. If reported, scores that are not more than 5 years in advance of the application date are sent to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).)

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5

- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Interview:** Students applying to the MEng program may be required to interview with the department chair or a designated faculty member.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Specialization Courses</b>		
Select three specializations from the following and complete 9 credits in each of the three areas:		
Advanced Manufacturing and Robotics		
MEE 5411	Introduction to Mobile Robotics	27
MEE 5412	Modern Dynamics for Robotics	
MEE 5413	Robotic Manipulation	
MEE 5643	Manufacturing Engineering	
Cybersecurity		
ECE 5516	Introduction to Communication Networks	27
ECE 5526	Engineering Principles of Computer Intrusion and Detection	
ECE 5826	Information Theory	
Engineering Project Management		
EMGT 5634	Project Management Overview and Project Management Essentials	27
EMGT 5635	Financial Management for Technologists	
EMGT 5641		
EMGT 5642	Project Management - Project Planning, Implementation and Case Study	
EMGT 5645	Fundamentals of Interpersonal Leadership for Technologists	27
EMGT 5647		
EMGT 5643		
New Product Development		
EMGT 5631	Design Thinking	27
EMGT 5637	Marketing Technological Products and Services	
EMGT 5643		
EMGT 5644		
EMGT 5645	Fundamentals of Interpersonal Leadership for Technologists	27
EMGT 5646	Fundamentals of Team Leadership	
<b>Capstone Course</b>		
ENGR 9995	Project	3
<b>Total Credit Hours</b>		<b>30</b>

**Culminating Event:**

*Capstone Course:*

The integrative capstone project (ENGR 9995) is proposed by the student. The project should integrate the different skills learned for

each of the three specialty areas to address an industry need. A faculty member is selected to serve as an advisor for the capstone project.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/engineering-meng-en-engr-meng>

### Department Information:

College of Engineering  
ATTN: Master of Engineering Program  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

#### Admissions:

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

#### Program Director:

Thomas V. Edwards, DPS  
tuc56565@temple.edu  
215-204-7794

## Engineering Management MS

COLLEGE OF ENGINEERING

Learn more about the Master of Science in Engineering Management.

### About the Program

The interdisciplinary Master of Science in Engineering Management is hosted by the College of Engineering in collaboration with the Fox School of Business and Management. The degree program is designed as a career development option for students interested in technology-based ventures who desire to learn specific management techniques associated with the management of technology development and technology-based projects or the introduction of new technologies into existing organizations.

Students who complete the MS in Engineering Management learn many of the skills and approaches necessary to increase the productivity and innovative capacity of technology-driven organizations. They are exposed to aspects of management education, such as project management, IP strategy and quality management, to which they may not have previously been exposed.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Many courses are offered on Main Campus and include online components. Eventually, students will be able to complete

the program entirely online. The online program requires some in-person classroom participation.

**Full-Time/Part-Time Status:** The degree program can be completed full-time in one year or part-time over two years. Part-time students may extend the completion deadline to three years, based on circumstances.

**Interdisciplinary Study:** Designed as an interdisciplinary program, the source of courses has been balanced between the College of Engineering and Fox School of Business and Management.

**Affiliation(s):** Research is supported by the Fox School of Business and Management's Innovation and Entrepreneurship Institute and Small Business Development Center. Research interests of the Fox School and College of Engineering faculty are also supported by numerous centers and institutes throughout Temple University.

**Accreditation:** The overall curriculum is designed to meet the requirements of the American Society for Engineering Management.

**Non-Matriculated Student Policy:** Students with an undergraduate GPA of 3.0 or higher may be allowed to take classes on a non-matriculated basis. Non-matriculated students may take a maximum of 9 credits. Any additional courses require the student to be matriculated in a program.

**Financing Opportunities:** For more information, contact the Department of Engineering, Technology and Management in the College of Engineering.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Late applications may be considered for admission. Ordinarily, the applicant is informed of an admissions decision within 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Recommendations should be professional references from supervisors and co-workers or academic references. References should be obtained from those who know the applicant well and who can attest to the applicant's ability to excel in the MS in Engineering Management program.

**Coursework Required for Admission Consideration:** Applicants should have a technical background in engineering, mathematics, science or technology. Two years' relevant work experience in a company is preferred, but exceptions can be made.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in engineering, science or technology is required.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly

from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** An essay on your professional plans and goals should be one to three pages in length. It should reflect your influences, values, aspirations and interest in the MS in Engineering Management program. The following questions may be addressed:

- What particular past experiences or previous exposure (academic, professional, etc.) prepared or motivated you to pursue an MS in Engineering Management degree?
- How would you expect to change over the course of the program?
- What personal and professional values and skills do you hope to acquire through the academic content?
- How will obtaining the MS in Engineering Management degree support your career objectives or potential career path(s)?
- Given the importance of teamwork and collaboration in business, what are the most significant strengths or contributions you bring to a team?

#### Standardized Test Scores:

GRE: Optional. If reported, scores that are not more than 5 years in advance of the application date are sent to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).)

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30, with a minimum of 16.5 credits taken in the College of Engineering and a minimum of 6 credits taken in the Fox School of Business and Management

*Required Courses:*

Code	Title	Credit Hours
<b>College of Engineering Courses</b>		
EMGT 5631	Design Thinking	1.5
EMGT 5632	Intrapreneurship: Managing the New Product Development Process	3
EMGT 5633	Management Principles for Innovators, Engineers and Technologists	3
EMGT 5634	Project Management Overview and Project Management Essentials	1.5
EMGT 5635	Financial Management for Technologists	1.5
EMGT 5636	Lean Six Sigma and the Science of Improvement	3

#### Fox School of Business and Management Courses

Select courses from the following:		6
SGM 5135	Innovation Intelligence: Plan, Build, Protect, and Monetize a Technology / Innovation Portfolio	
SGM 5137	Entrepreneurial Thinking and New Venture Creation	
SGM 5138	Global Innovation Strategy: Creating Agile, Innovative, Globally-Competitive Organizations	
SGM 5139	Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas	
SGM 5142	Business Model Innovation	
SGM 5144	Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges	
SGM 5145	Plan, Pitch, and Fund an Entrepreneurial Start-Up	
SGM 5148	Open Innovation and Managing Strategic Alliances	

**Electives**<sup>1</sup> **7.5**

#### Capstone Course

EMGT 9995	Capstone for Engineering Management	3
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**Total Credit Hours** **30**

1

Students select electives from either the Fox School of Business and Management (e.g., BA 5118 Strategic Performance Management, MSOM 5806 Managing Operations in the Enterprise, SGM 5108 New Venture Creation, STAT 5001 Quantitative Methods for Business) or the College of Engineering (e.g., MIS 5108 Digital Business Strategy).

#### Culminating Event:

*Capstone Course:*

Successful completion of EMGT 9995 Capstone for Engineering Management (3 s.h.) constitutes the culminating event for the MS in Engineering Management.

## Contacts

#### Program Web Address:

<https://www.temple.edu/academics/degree-programs/engineering-management-ms-en-emgt-ms>

#### Department Information:

College of Engineering  
ATTN: Engineering Management MS Program  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

#### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

#### Department Contacts:

*Admissions:*  
Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

*Program Director:*

Thomas V. Edwards, DPS  
 tuc56565@temple.edu  
 215-204-7794

# Environmental Engineering MSEnVE

COLLEGE OF ENGINEERING

Learn more about the Master of Science in Environmental Engineering.

## About the Program

The MSEnVE program is designed to provide students with the opportunity to develop a greater technical competency in the general area of Environmental Engineering. Students are motivated to grow intellectually through the continued search for and use of knowledge, and are provided with the catalyst to become active, articulate and socially aware individuals. Graduates of the program are key contributors to the civil engineering and environmental engineering professions.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary research with other branches of engineering as well as with various departments in the sciences and applied mathematics. Recent collaborative work with the Department of Mechanical Engineering includes projects on water flow and solute transport in porous media (aquifers) and the effects of turbulence on the mixing of oil spills at sea. Collaboration with the Department of Chemistry includes research on waste combustion products and surface complexation.

**Areas of Specialization:** For each of the two areas of specialization, research includes:

- Civil Engineering Systems – three major branches of civil engineering: construction engineering, structural engineering, and transportation engineering
- Environmental Engineering – the fundamentals and applications of water resources engineering, pollution in natural systems (water and air), and engineered treatment and remediation systems

For the MSEnVE program, students also choose between three tracks:

1. The Thesis Track is intended for students pursuing advanced research and includes 24 credits of didactic coursework, 3 credits of Project (CEE 9995), and 3 credits of Thesis (CEE 9996).
2. The Project Track introduces students to applied research and includes 27 credits of didactic coursework and 3 credits of Project (CEE 9995).
3. The Coursework Track provides students with an advanced engineering background for their future in the engineering profession through 30 credits of didactic coursework.

In the first term, the student and the Civil and Environmental Engineering (CEE) Graduate Program Director establish a graduate Plan of Study that outlines all required courses and the sequence for the student to follow. This form is used to track the student's progress as the various

benchmarks in the program are completed. Once established, any revisions to the Plan of Study require approval in advance. However, if considering whether to change one's track, the student should note that:

- "Thesis" credits (CEE 9996) can only be applied toward the Thesis MSEnVE Track and cannot be applied to either the Project or Coursework Tracks.
- "Project" credits (CEE 9995) can be applied toward the Thesis and Project MSEnVE Tracks but cannot be used for the Coursework Track.

**Job Prospects:** Graduates with the MSEnVE in Environmental Engineering are employed by various engineering companies as well as government agencies in design, analysis and applications. Typical examples are water treatment facilities and regulatory agencies engaged in environmental regulation and pollution control; companies involved in construction project management; and those involved in structural design and analysis of buildings, bridges and other structures. Students who complete an MSEnVE with a thesis are prepared to enter a doctoral program.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the MSEnVE degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the CEE Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the MSEnVE program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Three forms of financial aid are offered to graduate students:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual CEE faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's Thesis advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: These highly competitive University-wide grants are typically awarded only to PhD-program applicants.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Late applications may be considered for admission. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*



Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

Both admissions and financial aid award decisions originate in the Department of Civil and Environmental Engineering (CEE). Applicants are encouraged to contact the CEE Graduate Program Director for advice and consultation in the application process.

#### Letters of Reference:

*Number Required: 3*

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the CEE Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The CEE Department identifies the needed coursework on a case-by-case basis.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree in Environmental Engineering is the preferred prerequisite degree. However, students who have earned a bachelor's degree in a related field are encouraged to apply, with the understanding that remedial preparatory courses may be a pre-condition of admission to the MSEnvE program.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The CEE Graduate Program Director helps the applicant navigate the admission possibilities, including the "Non-Matriculated Student Policy" option.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences and career goals in one to two pages.

#### Standardized Test Scores:

GRE: Optional. If reported, scores that are not more than 5 years in advance of the application date are sent to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).)

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the

testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits taken at an accredited institution prior to matriculation may be transferred into the MSEnvE program. In order to transfer, the courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better. The maximum number of credits a student may transfer is 6. (See Graduate School Policy 02.24.21 (p. 18).)

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

### Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
CEE 5701 or CEE 8701	Physical Principals of Environmental Systems Advanced Physical/Chemical Treatment Processes	3
CEE 5702 or CEE 5762	Chemical Principles of Environmental Systems Environmental Organic Chemistry	3
CEE 5794 or CEE 5793	Advanced Biological Wastewater Treatment Environmental Biotechnology	3
<b>Specialization Electives</b>		
Select four from the following:		12
CEE 5621	Engineering Hydrology	
CEE 5622	Fate of Pollutants in Subsurface Environments	
CEE 5623	Contaminant Dynamics in Urban Streams	
CEE 5631	Environmental Hydrology	
CEE 5641	Urban Streams and Stormwater Management	
CEE 5711	Air Pollution Control	
CEE 5751	Water and Wastewater Treatment	
CEE 5795	Aquatic Toxicology in Environmental Engineering	
<b>Approved Elective</b> <sup>1</sup>		<b>3</b>
<b>Research Courses</b>		
CEE 9995	Project	3
CEE 9996	Thesis	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

Approved electives generally include graduate courses within the CEE Department and may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework in another department within the College of Engineering or outside the College in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

## Project Track

Code	Title	Credit Hours
<b>Core Courses</b>		
CEE 5701 or CEE 8701	Physical Principals of Environmental Systems Advanced Physical/Chemical Treatment Processes	3
CEE 5702 or CEE 5762	Chemical Principles of Environmental Systems Environmental Organic Chemistry	3
CEE 5794 or CEE 5793	Advanced Biological Wastewater Treatment Environmental Biotechnology	3
<b>Specialization Electives</b>		
Select five from the following:		15
CEE 5621	Engineering Hydrology	
CEE 5622	Fate of Pollutants in Subsurface Environments	
CEE 5623	Contaminant Dynamics in Urban Streams	
CEE 5631	Environmental Hydrology	
CEE 5641	Urban Streams and Stormwater Management	
CEE 5711	Air Pollution Control	
CEE 5751	Water and Wastewater Treatment	
CEE 5795	Aquatic Toxicology in Environmental Engineering	
<b>Approved Elective</b> <sup>1</sup>		<b>3</b>
<b>Research Course</b>		
CEE 9995	Project	3
<b>Total Credit Hours</b>		<b>30</b>

1

Approved electives generally include graduate courses within the CEE Department and may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework in another department within the College of Engineering or outside the College in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

## Coursework Track

Code	Title	Credit Hours
<b>Core Courses</b>		
CEE 5701 or CEE 8701	Physical Principals of Environmental Systems Advanced Physical/Chemical Treatment Processes	3
CEE 5702 or CEE 5762	Chemical Principles of Environmental Systems Environmental Organic Chemistry	3
CEE 5794 or CEE 5793	Advanced Biological Wastewater Treatment Environmental Biotechnology	3
<b>Specialization Electives</b>		
Select six from the following:		18
CEE 5621	Engineering Hydrology	
CEE 5622	Fate of Pollutants in Subsurface Environments	
CEE 5623	Contaminant Dynamics in Urban Streams	
CEE 5631	Environmental Hydrology	
CEE 5641	Urban Streams and Stormwater Management	
CEE 5711	Air Pollution Control	
CEE 5751	Water and Wastewater Treatment	
CEE 5795	Aquatic Toxicology in Environmental Engineering	

Approved Elective	3
Total Credit Hours	30

1

Approved electives generally include graduate courses within the CEE Department and may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework in another department within the College of Engineering or outside the College in one of Temple University's other schools/colleges need to obtain the appropriate written approvals on their Plan of Study form.

### Culminating Events:

#### Thesis Track:

The culminating events in the Thesis Track are typically undertaken during the last two successive terms of study. Successful completion requires the following:

- Thesis Proposal — CEE 9995 Project (3 credits)  
Under the guidance of the advisor, the student conducts independent research on an applied engineering topic of current interest and registers for CEE 9995. This work includes the research and preliminary results that form the basis of an extended study that the student plans to carry on in CEE 9996 Thesis in the following term. The student submits a research report as their Thesis Proposal to a committee consisting of three or more faculty members, including the faculty advisor, and presents their proposal in an open College-wide seminar, which is scheduled and posted at least 10 business days in advance of the presentation date. Immediately following the presentation, the student's advisory committee questions the student about the details and strategy of the proposed research. The committee then accepts, accepts with revisions, or rejects the proposal.  
The student must pass the Thesis Proposal before registering for CEE 9996. If the student fails Thesis Proposal, they may either re-register for CEE 9995 (1 credit) in the next regular term and repeat the entire proposal process or consider switching to the Project or Coursework Track. *NOTE: A second failure of Thesis Proposal results in automatic dismissal from the University.* If switching to another track, the Plan of Study form requires updating and appropriate approvals.
- Thesis Defense — CEE 9996 Thesis (3 credits)  
The student should register for CEE 9996 in the term that they plan to defend the thesis. The thesis document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.26.12.02 (p. 22).) Two weeks prior to the thesis defense, the student provides the committee with a copy of the completed thesis and posts an announcement of the defense, which is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the thesis defense is held, then the defense should take place at least 30 days prior to the end of the term.  
The thesis defense is an open College seminar in which the student presents the concepts and results of their research. Immediately following the defense, the thesis committee convenes to closely examine the student's research and decide to accept the thesis as provided, accept the thesis with revisions, or not accept the thesis. If the thesis is accepted, a letter grade for CEE 9996 is assigned. If the thesis is accepted with revisions, then the student must submit the revised thesis within 30 days and with the approval of the Thesis Committee. If the thesis is not accepted, but the committee decides

to not fail the student, an "R" grade is assigned to CEE 9996. In the following term, the student registers for one credit of ENGR 9991 Directed Research until they are again prepared to attempt the defense. The defense procedures described above are then carried out again in the term that the student is prepared to defend the thesis.

*Project Track:*

The culminating event for the Project Track is CEE 9995 Project. This entails a one-term research activity done under the supervision of a full-time faculty advisor on an applied engineering topic of interest. Near the end of the term, the student prepares a report of their findings and presents the study in an open departmental seminar. Both the seminar and the written report are used to determine the student's grade for CEE 9995. The grade is determined jointly by the advisor and another designated grader selected by the Graduate Program Director.

*Coursework Track:*

No culminating event is warranted for the Coursework Track.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/environmental-engineering-ms-en-enve-msen>

### Department Information:

Dept. of Civil and Environmental Engineering  
ATTN: CEE Programs, College of Engineering  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

*Graduate Program Director, CEE:*

Joseph Coe, PhD  
joseph.coe@temple.edu  
215-204-6100

*Chairperson, CEE:*

Rominder Suri, PhD  
rsuri@temple.edu  
215-204-2378

## Environmental Engineering PhD

COLLEGE OF ENGINEERING

Learn more about the Doctor of Philosophy in Environmental Engineering.

## About the Program

The PhD in Environmental Engineering is designed to produce graduates who have:

- built a solid core knowledge base in science, technology, environmental engineering and mathematics;
- gained the ability to adapt to interdisciplinary research projects and employ emerging technology;
- learned how to plan, develop and conduct a research project on their own as future principal investigators; and
- mastered professional oral and written communication skills.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students are able to complete the didactic portion of the PhD degree program through classes offered after 4:30 p.m.

**Interdisciplinary Study:** Research in Environmental Engineering is interdisciplinary and requires collaboration of members of the faculty and students within all departments of the College of Engineering, in the Mathematics Department and departments engaged in the study of the sciences, and at the Lewis Katz School of Medicine at Temple University.

**Areas of Specialization:** Faculty in the Department of Civil and Environmental Engineering are actively engaged in research in the following areas of Environmental Engineering:

- Advanced treatments for drinking water and wastewater
- Emerging contaminants in the environment
- Environmental biotechnology
- Fate and transformation of environmental contaminants
- Surface and subsurface hydrology

In the first term, the student and the Civil and Environmental Engineering (CEE) Graduate Program Director jointly initiate a Plan of Study. This form lists all required courses and the program requirement sequence for the student to follow. The Plan of Study is used to track the student's progress, with an annual annotation and update as the student completes various benchmarks in the PhD program.

**Job Prospects:** The program is primarily intended for individuals who wish to pursue careers in industry, government and academia in a highly creative environment. The program is dedicated to producing engineers who will contribute to advancements in environmental engineering.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the PhD degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the CEE Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the PhD program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Applicants for full-time study in the Environmental Engineering PhD program are automatically considered

for financial aid. Three forms of financial aid are awarded to PhD students on a competitive basis:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's doctoral advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: Fellowships are awarded by the University in a competitive process that is open to all PhD applicants. The CEE Graduate Program Director nominates exceptional PhD applicants for a University Fellowship. Fellows receive 9 to 12 months of stipend, depending on the award; basic health insurance; and 12 credits of tuition remission each Fall and Spring term. Fellows of the University have no work obligations with respect to either the Department, the College, or the University.

Because financial aid is awarded on a competitive basis, applicants are urged to complete the application as early as possible.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Both admissions and financial aid award decisions originate in the Department of Civil and Environmental Engineering within the College of Engineering. Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the CEE Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The Department of Civil and Environmental Engineering identifies the needed coursework on a case-by-case basis.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The CEE Graduate Program Director helps the applicant navigate the admission possibilities and assists in the assessment of their overall educational qualifications with respect to the departmental requirements for the PhD program.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences, career goals, and specific research interests in one to two pages, ensuring that you have clearly identified your area of interest within the field of civil and environmental engineering.

### Standardized Test Scores:

GRE: Required. Scores that are not more than 5 years in advance of the application date are sent by Educational Testing Service (ETS) to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).) Applicants who require a waiver of the GRE should consult the CEE Graduate Program Director concerning the mechanics and consequences of obtaining an exception.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Advanced Standing:** Both transfer credit for courses taken at another institution while matriculated at Temple and/or advanced standing credit for courses taken within the 5-year period prior to matriculating at Temple may be applied toward the PhD-level didactic coursework requirement. Written approval is required from the student's doctoral advisor, the College's Associate Dean for Graduate Study, and the Graduate School. (See Graduate School Policy 02.24.21 (p. 18).) Up to six credits of advanced standing for courses taken within the 5-year period prior to matriculating at Temple may be used to satisfy the master's-level didactic coursework requirement. Approval of the CEE Graduate Program Director is required. The courses must be equivalent to courses offered at

Temple in the student's area of study and research, and the grades must be "B" or better.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Bachelor's:* 60, including 45 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Number of Credits Required Beyond the Master's:* 30, including 15 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Required Courses:*

### Post-Baccalaureate (for students WITHOUT a master's degree in Environmental Engineering)

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		<b>45</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
CEE 9991	Directed Research (1-9 credits)	
CEE 9994	Preliminary Examination Preparation (1-2 credits)	
CEE 9998	Pre-Dissertation Research (1 credit minimum)	
CEE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>60</b>

1

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of CEE 9182 Independent Study I, 3 credits of CEE 9282 Independent Study II, or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of CEE 9994, a minimum of 1 credit of CEE 9998, and a minimum of 2 credits of CEE 9999, with the further stipulation that the minimum number of credits taken in CEE 9994, CEE 9998 and CEE 9999 combined is 6.

### Post-Master's (for students WITH a master's degree in Environmental Engineering)

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		<b>15</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
CEE 9991	Directed Research (1-9 credits)	
CEE 9994	Preliminary Examination Preparation (1-2 credits)	
CEE 9998	Pre-Dissertation Research (1 credit minimum)	

CEE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of CEE 9182 Independent Study I, 3 credits of CEE 9282 Independent Study II, or 3 credits of CEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of CEE 9994, a minimum of 1 credit of CEE 9998, and a minimum of 2 credits of CEE 9999, with the further stipulation that the minimum number of credits taken in CEE 9994, CEE 9998 and CEE 9999 combined is 6.

### Culminating Events:

*Formation of the Doctoral Advisory Committee:*

Selection of a research advisor and formation of a Doctoral Advisory Committee constitute the first steps toward achieving a PhD. Selection of a doctoral advisor depends on the student's level of preparation upon entering the PhD program. The Doctoral Advisory Committee selects the required coursework and guides the progress of the student's dissertation research:

- Students entering the PhD program with a master's degree, i.e., those who must complete 30 credits to earn the degree, form their Doctoral Advisory Committee before the end of their second regular term of study.
- Students entering the program with a bachelor's degree, i.e., those who must complete 60 credits to earn the PhD degree, generally complete most of their coursework before forming their Doctoral Advisory Committee by the end of their fourth regular term in the program.

See Graduate School Policy 02.28.11 (p. 23) for clarification on the composition of the Doctoral Advisory Committee.

*Preliminary Examination:*

All students generally complete their didactic coursework prior to taking the preliminary examination. (See Graduate School Policy 02.27.11 (p. 22).) Students in the 30-credit cohort ordinarily take the exam in their third or fourth term. Students in the 60-credit cohort typically take the exam no later than the eighth regular term. Students should register for one credit of CEE 9994 Preliminary Examination Preparation in the term when the exam will be taken.

The preliminary exam tests both the student's core knowledge in Environmental Engineering and their capacity to synthesize and interpret research communications. The student coordinates the scheduling of the preliminary exam with the CEE Graduate Program Director. The CEE Graduate Program Director supervises the specific form, content and frequency of the Environmental Engineering preliminary exam. A maximum of two opportunities to pass the preliminary exam are available to the student. In each term when the exam is attempted, the student

registers for one credit of CEE 9994. Students are dismissed upon the second failure.

#### *Dissertation Proposal:*

Within a year of passing the preliminary exam, the student must develop a written research proposal and present it in an open College seminar. Ten business days prior to the presentation seminar, the student must schedule the proposal and post an announcement. Immediately following the seminar, the Doctoral Advisory Committee questions the student about the details and strategy of their proposed research.

Approval is granted for the proposed dissertation research when the "Dissertation Proposal Transmittal for Elevation to Candidacy" form (found in TUportal under the Tools tab within "University Forms") has been signed off by the entire Doctoral Advisory Committee. After the dissertation proposal has been accepted by the Doctoral Advisory Committee and the Graduate School has received the form, the student is considered to be a doctoral candidate. (See Graduate School Policy 02.28.12 (p. 23) for more information.)

#### *Research Credits:*

Students carry out research throughout their studies and register for the corresponding research credits while in the PhD program. However, the type of research credits that a student registers for depends on the student's progress in the program:

- Prior to passing the preliminary exam, credit hours associated with the student's research should be registered under CEE 9991 Directed Research.
- After the preliminary exam is passed, but before elevation to candidacy, credit hours associated with the student's research should be registered under CEE 9998 Pre-Dissertation Research.
- After elevation to candidacy, the student's research credits should be registered under CEE 9999 Dissertation Research. Students are required to register for at least three credits of CEE 9999 following their elevation to candidacy. (See Graduate School Policy 02.28.15 (p. 23).)

#### *Publications:*

Paper writing and presentation at a conference are considered integral to the student's training. Also, peer review, in part, offers an indication of the quality and novelty of the student's research. All doctoral students must publish at least two technical papers in refereed journals or refereed conferences. The papers must be based on the student's dissertation research with the student as the first author.

#### *Dissertation:*

The dissertation defense is an open University seminar in which the student presents the concepts and results of their research.

The student must coordinate the formation of the Dissertation Examining Committee in the term that they intend to defend their dissertation. This committee consists of the original Doctoral Advisory Committee plus one additional "external" member who is not faculty in the College of Engineering. If the external examiner is not a member of Temple University's Graduate Faculty, the person must be approved by the Graduate School at least four weeks prior to the dissertation defense.

The dissertation defense is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the dissertation defense is held, then the defense should take place at least 30 days prior to the end of the term to allow for document revisions.

Three weeks prior to the defense, the members of the committee elect a Chair of the Dissertation Examining Committee. The Chair cannot be the student's doctoral advisor. The Associate Dean of Research and Graduate Studies must approve the selection. The Chair is identified to the Graduate School in the student's official request for permission to schedule the defense. (See Graduate School Policy 02.28.15 (p. 23).) The Chair's role includes coordination of the proceedings of the defense and completion of all relevant College and Graduate School forms concerning the defense.

The dissertation document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.28.18 (p. 23).) A copy of the completed dissertation must be provided to the committee at least three weeks before the date of the dissertation defense. Note that any Graduate Faculty may request a copy of the dissertation in advance of the defense and may participate in the defense.

A minimum of two weeks prior to the defense, a public announcement of the defense must be posted. Prior to posting, this announcement must be approved in writing by the Graduate School. (See Graduate School Policy 02.28.16 (p. 23).)

Immediately following the presentation, the Dissertation Examining Committee closely examines the student's performance and their research. External attendees may participate in this closed portion of the defense with the permission of the Dissertation Examining Committee Chair. However, only members of the Dissertation Examining Committee may actually vote on the decision to accept the dissertation as prepared, accept the dissertation with revisions, or not accept the dissertation. If the dissertation is accepted with revisions, a revised copy of the dissertation must be submitted and approved by the Committee within 30 days of the original defense date.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/environmental-engineering-phd-en-enve-phd>

### Department Information:

College of Engineering  
ATTN: CEE Programs  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*  
Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

*Graduate Program Director, CEE:*  
Joseph Coe, PhD  
joseph.coe@temple.edu

215-204-6100

Chairperson, CEE:  
Rominder Suri, PhD  
rsuri@temple.edu  
215-204-2378

## Mechanical Engineering MSME

COLLEGE OF ENGINEERING

Learn more about the Master of Science in Mechanical Engineering.

### About the Program

The MSME program provides students who already have an undergraduate Engineering degree with the credentials and background to pursue a career in industrial research and development. The program provides students from diverse basic science backgrounds with the fundamental technical engineering expertise necessary to work in an interdisciplinary field such as Bioengineering or Material Science. The program provides engineers who are currently employed with a means to further their technical capabilities through part-time study.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary research with other branches of engineering as well as with various departments of the College of Science and Technology and the Lewis Katz School of Medicine. Faculty are also collaborating with investigators in the Department of Civil and Environmental Engineering on water turbulence studies; in the Department of Electrical and Computer Engineering on heat dissipation in microelectronic components; and in the Department of Physics on nanotechnology research.

**Areas of Specialization:** Research is offered in:

- Biomaterials
- Composite materials and design
- Finite element analysis and computational fluid dynamics
- Fluidics and energetics
- Target drug delivery and tissue engineering

For the MSME program, students also choose between three tracks:

1. The Thesis Track is intended for students pursuing advanced research and includes 24 credits of didactic coursework, 3 credits of Project (MEE 9995), and 3 credits of Thesis (MEE 9996).
2. The Project Track introduces students to applied research and includes 27 credits of didactic coursework and 3 credits of Project (MEE 9995).
3. The Coursework Track provides students with an advanced engineering background for their future in the engineering profession through 30 credits of didactic coursework.

In the first term, the student and the Mechanical Engineering (ME) Graduate Program Director establish a graduate Plan of Study that outlines all required courses and the sequence for the student to follow. This form is used to track the student's progress as the various

benchmarks in the program are completed. Once established, any revisions to the Plan of Study require approval in advance. However, if considering whether to change one's track, the student should note that:

- "Thesis" credits (MEE 9996) can only be applied toward the Thesis MSME Track and cannot be applied to either the Project or Coursework Tracks.
- "Project" credits (MEE 9995) can be applied toward the Thesis and Project MSME Tracks but cannot be used for the Coursework Track.

**Job Prospects:** Graduates with the MSME in Mechanical Engineering are employed in high-tech industries and government laboratories in design, analysis and applications. Typical employers include manufacturing companies; pharmaceutical and biotechnology companies; companies involved in research and development in fluid flow and heat transfer; computer-aided designers and manufacturers; computer technology firms; and government offices such as the U.S. Patent and Trademark Office. Students who complete an MSME with a thesis are prepared to enter a doctoral program.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the MSME degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the ME Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the MSME program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Three forms of financial aid are offered to graduate students:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual ME faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's Thesis advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: These highly competitive University-wide grants are typically awarded only to PhD-program applicants.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1; August 1 international

Applications are processed on a continual basis. Late applications may be considered for admission. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

Both admissions and financial aid award decisions originate in the Department of Mechanical Engineering (ME). Applicants are encouraged to contact the ME Graduate Program Director for advice and consultation in the application process.

#### Letters of Reference:

*Number Required: 3*

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the ME Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The ME Department identifies the needed coursework on a case-by-case basis.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree in Mechanical Engineering is the preferred prerequisite degree. However, students who have earned a bachelor's degree in a related field are encouraged to apply, with the understanding that remedial preparatory courses may be a pre-condition of admission to the MSME program.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The ME Graduate Program Director helps the applicant navigate the admission possibilities, including the "Non-Matriculated Student Policy" option.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences and career goals in one to two pages.

#### Standardized Test Scores:

GRE: Optional. If reported, scores that are not more than 5 years in advance of the application date are sent to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).)

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the

testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits taken at an accredited institution prior to matriculation may be transferred into the MSME program. In order to transfer, the courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better. The maximum number of credits a student may transfer is 6. (See Graduate School Policy 02.24.21 (p. 18).)

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

## Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
ENGR 5117	Experimental Methods	3
Select one course from the following:		3
ENGR 5011	Engineering Mathematics I	
ENGR 5012	Engineering Mathematics II	
Select one additional course from the following:		3
ENGR 5314	Continuum Mechanics	
ENGR 5334	Dynamical Systems	
MEE 5117	Finite Element Analysis	
<b>Electives <sup>1</sup></b>		<b>15</b>
<b>Research Courses</b>		
MEE 9995	Project	3
MEE 9996	Thesis	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of MEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

## Project Track

Code	Title	Credit Hours
<b>Core Courses</b>		
ENGR 5117	Experimental Methods	3
Select one course from the following:		3
ENGR 5011	Engineering Mathematics I	
ENGR 5012	Engineering Mathematics II	



Select one additional course from the following:	3
ENGR 5314 Continuum Mechanics	
ENGR 5334 Dynamical Systems	
MEE 5117 Finite Element Analysis	
<b>Electives</b> <sup>1</sup>	<b>18</b>
<b>Research Course</b>	
MEE 9995 Project	3
<b>Total Credit Hours</b>	<b>30</b>

1

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of MEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

## Coursework Track

Code	Title	Credit Hours
<b>Core Courses</b>		
ENGR 5117	Experimental Methods	3
Select one course from the following:		3
ENGR 5011	Engineering Mathematics I	
ENGR 5012	Engineering Mathematics II	
Select one additional course from the following:		3
ENGR 5314	Continuum Mechanics	
ENGR 5334	Dynamical Systems	
MEE 5117	Finite Element Analysis	
<b>Electives</b> <sup>1</sup>		<b>21</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework may include up to, but no more than, 3 credits of ENGR 9182 Independent Study I or 3 credits of MEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

### Culminating Events:

#### Thesis Track:

The culminating events in the Thesis Track are typically undertaken during the last two successive terms of study. Successful completion requires the following:

- Thesis Proposal — MEE 9995 Project (3 credits)  
Under the guidance of the advisor, the student conducts independent research on an applied engineering topic of current interest and registers for MEE 9995. This work includes the research and preliminary results that form the basis of an extended study that the student plans to carry on in MEE 9996 Thesis in the following term. The student submits a research report as their Thesis Proposal to a committee consisting of three or more faculty members, including the faculty advisor, and presents their proposal in an open College-wide seminar, which is scheduled and posted at least 10 business days in advance of the presentation date. Immediately following the presentation, the student's advisory committee questions the student about the details and strategy of the proposed research.

The committee then accepts, accepts with revisions, or rejects the proposal.

The student must pass the Thesis Proposal before registering for MEE 9996. If the student fails Thesis Proposal, they may either re-register for MEE 9995 (1 credit) in the next regular term and repeat the entire proposal process or consider switching to the Project or Coursework Track. *NOTE: A second failure of Thesis Proposal results in automatic dismissal from the University.* If switching to another track, the Plan of Study form requires updating and appropriate approvals.

- Thesis Defense — MEE 9996 Thesis (3 credits)  
The student should register for MEE 9996 in the term that they plan to defend the thesis. The thesis document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.26.12.02 (p. 22).) Two weeks prior to the thesis defense, the student provides the committee with a copy of the completed thesis and posts an announcement of the defense, which is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the thesis defense is held, then the defense should take place at least 30 days prior to the end of the term.  
The thesis defense is an open College seminar in which the student presents the concepts and results of their research. Immediately following the defense, the thesis committee convenes to closely examine the student's research and decide to accept the thesis as provided, accept the thesis with revisions, or not accept the thesis. If the thesis is accepted, a letter grade for MEE 9996 is assigned. If the thesis is accepted with revisions, then the student must submit the revised thesis within 30 days and with the approval of the Thesis Committee. If the thesis is not accepted, but the committee decides to not fail the student, an "R" grade is assigned to MEE 9996. In the following term, the student registers for one credit of ENGR 9991 Directed Research until they are again prepared to attempt the defense. The defense procedures described above are then carried out again in the term that the student is prepared to defend the thesis.

#### Project Track:

The culminating event for the Project Track is MEE 9995 Project. This entails a one-term research activity done under the supervision of a full-time faculty advisor on an applied engineering topic of interest. Near the end of the term, the student prepares a report of their findings and presents the study in an open departmental seminar. Both the seminar and the written report are used to determine the student's grade for MEE 9995. The grade is determined jointly by the advisor and another designated grader selected by the Graduate Program Director.

#### Coursework Track:

No culminating event is warranted for the Coursework Track.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/mechanical-engineering-ms-en-me-msme>

### Department Information:

Dept. of Mechanical Engineering  
ATTN: ME Programs, College of Engineering  
1947 N. 12th Street  
Philadelphia, PA 19122-6077

gradengr@temple.edu  
215-204-7800

## Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

## Department Contacts:

### Admissions:

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

### Graduate Program Director, ME:

Kurosh Darvish, PhD  
kurosh.darvish@temple.edu  
215-204-4307

### Interim Chairperson, ME:

Shih-Jiun (Jim) Chen, PhD  
jsjchen@temple.edu  
215-204-4305

# Mechanical Engineering PhD

## COLLEGE OF ENGINEERING

Learn more about the Doctor of Philosophy in Mechanical Engineering.

## About the Program

The PhD in Mechanical Engineering is designed to develop mechanical engineers who have a solid foundation in mechanical engineering research methods, design and analytics. Doctoral students are prepared to identify a research area in mechanical engineering and analyze the literature, develop theory, perform experimentation, and develop their own methodologically rigorous research studies. Students complete their studies with a mastery of the fundamental critical thinking and analytic skills and competencies necessary for mechanical engineering. Graduates are well prepared to be engineers and researchers in a range of academic units, nonprofit organizations, government agencies and the private sector.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students are able to complete the didactic portion of the PhD degree program through classes offered after 4:30 p.m.

**Interdisciplinary Study:** Engineering research is highly interdisciplinary and draws on collaboration with members of the faculty and students within the department, as well as with departments in other schools and colleges at Temple University, including the Lewis Katz School of Medicine and the College of Science and Technology.

**Areas of Specialization:** Faculty in the Department of Mechanical Engineering are actively engaged in research in the following areas:

- Biofluidics
- Biomechanics
- Combustion

- Composite materials
- Finite element analysis
- Fluid dynamics
- Fluid mechanics
- Heat and mass transfer
- Material science
- Mechanics of materials
- Vibration and controls

In the first term, the student and the Mechanical Engineering (ME) Graduate Program Director jointly initiate a Plan of Study. This form lists all required courses and the program requirement sequence for the student to follow. The Plan of Study is used to track the student's progress, with an annual annotation and update as the student completes various benchmarks in the PhD program.

**Job Prospects:** The program is primarily intended for individuals who wish to pursue careers in industry, government and academia in a highly creative environment. The program is dedicated to producing engineers who will contribute to advancements in mechanical engineering.

**Non-Matriculated Student Policy:** Up to 9 credits of graduate Engineering coursework may be taken at Temple University on a non-matriculated basis and subsequently applied to the PhD degree upon admission. If the applicant's undergraduate GPA was less than 3.0, a GPA of 3.25 or better is required on this non-matriculated graduate coursework to receive an admissions exception. Consequently, the ME Graduate Program Director may encourage those with an undergraduate GPA less than 3.0 to take their first three graduate courses prior to making formal application to the PhD program. (See the relevant Graduate School policies on special admission procedures for non-matriculated students: 02.23.11.03 (p. 16) and 02.24.19 (p. 18).)

**Financing Opportunities:** Applicants for full-time study in the Mechanical Engineering PhD program are automatically considered for financial aid. Three forms of financial aid are awarded to PhD students on a competitive basis:

1. Teaching Assistantship (TA): TA awards are made solely by the Department and require the awardee to work 20 hours per week in support of the Department's undergraduate programs. The TA is compensated with a 9-month stipend, a basic health-insurance plan, and 9 credits per term of tuition remission.
2. Research Assistantship (RA): Individual faculty confer RA awards, using their research funds, upon students who appear well-qualified to carry out the research. Typically, this faculty member becomes the RA's doctoral advisor. The RA normally works up to 20 hours per week and is compensated with a stipend, basic health insurance, and tuition remission.
3. Fellowships: Fellowships are awarded by the University in a competitive process that is open to all PhD applicants. The ME Graduate Program Director nominates exceptional PhD applicants for a University Fellowship. Fellows receive 9 to 12 months of stipend, depending on the award; basic health insurance; and 12 credits of tuition remission each Fall and Spring term. Fellows of the University have no work obligations with respect to either the Department, the College, or the University.

Because financial aid is awarded on a competitive basis, applicants are urged to complete the application as early as possible.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1

Spring: November 1; August 1 international

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within 4 to 6 weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

Both admissions and financial aid award decisions originate in the Department of Mechanical Engineering within the College of Engineering. Applicants who plan to matriculate full-time are automatically considered for financial aid awards so no separate application for financial aid is required. **To ensure financial aid consideration for the intended term of study, however, applicants should submit a complete application by January 15 (Fall) and August 1 (Spring).**

### Letters of Reference:

*Number Required: 3*

*From Whom:* Letters of recommendation should be obtained from college or research faculty who are familiar with the applicant's competency. If the applicant has an established career in engineering, one of the letters should be provided by the applicant's immediate supervisor. Any applicant who has been out of school long enough that relevant academic reference letters appear impractical should contact the ME Graduate Program Director to obtain a waiver of this admission requirement.

**Coursework Required for Admission Consideration:** Students not adequately prepared for advanced courses may be required to take a number of prerequisites. The Department of Mechanical Engineering identifies the needed coursework on a case-by-case basis.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required, but preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is required.

University regulations stipulate that the applicant must have earned a 3.0 grade-point average on a 4.0 scale in their undergraduate studies, but admission exceptions are made for a variety of circumstances. (See Graduate School Policy 02.23.11.03 (p. 16).) The ME Graduate Program Director helps the applicant navigate the admission possibilities and assists in the assessment of their overall educational qualifications with respect to the departmental requirements for the PhD program.

Official transcripts from all institutions of higher education attended, whether or not a degree was awarded, must be submitted. International applicants submit official transcripts or official NACES-accredited evaluation documentation that validates completion and conferral of a degree, diploma and/or certificate. All applicants must ensure transcripts and/or NACES-accredited documentation are sent directly from the institution(s) or NACES-accredited evaluation agency via email to gradengr@temple.edu or to the Temple University College of Engineering, 1947 N. 12th Street, Philadelphia, PA 19122-6077.

**Statement of Goals:** Describe your relevant technical experiences, career goals, and specific research interests in one to two pages.

### Standardized Test Scores:

GRE: Required. Scores that are not more than 5 years in advance of the application date are sent by Educational Testing Service (ETS) to test code 2945. (See Graduate School Policy 02.23.12 (p. 16).) Applicants who require a waiver of the GRE should consult the ME Graduate Program Director concerning the mechanics and consequences of obtaining an exception.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must ensure official scores are reported directly by the testing agency for a standardized test of English and meet one of these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Advanced Standing:** Both transfer credit for courses taken at another institution while matriculated at Temple and/or advanced standing credit for courses taken within the 5-year period prior to matriculating at Temple may be applied toward the PhD-level didactic coursework requirement. Written approval is required from the student's doctoral advisor, the College's Associate Dean for Graduate Study, and the Graduate School. (See Graduate School Policy 02.24.21 (p. 18).) Up to six credits of advanced standing for courses taken within the 5-year period prior to matriculating at Temple may be used to satisfy the master's-level didactic coursework requirement. Approval of the ME Graduate Program Director is required. The courses must be equivalent to courses offered at Temple in the student's area of study and research, and the grades must be "B" or better.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Bachelor's:* 60, including 45 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Number of Credits Required Beyond the Master's:* 30, including 15 credits of graduate-level didactic coursework and 15 research credits, including preliminary PhD examination and dissertation research

*Required Courses:*

### Post-Baccalaureate (for students WITHOUT a master's degree in Mechanical Engineering)

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		<b>45</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
MEE 9991	Directed Research (1-9 credits)	
MEE 9994	Preliminary Examination Preparation (1-2 credits)	
MEE 9998	Pre-Dissertation Research (1 credit minimum)	
MEE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>60</b>

1

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of MEE 9182 Independent Study I, 3 credits of MEE 9282 Independent Study II, or 3 credits of MEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of MEE 9994, a minimum of 1 credit of MEE 9998, and a minimum of 2 credits of MEE 9999, with the further stipulation that the minimum number of credits taken in MEE 9994, MEE 9998 and MEE 9999 combined is 6.

## Post-Master's (for students WITH a master's degree in Mechanical Engineering)

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		<b>15</b>
<b>Research Courses</b> <sup>2</sup>		<b>15</b>
MEE 9991	Directed Research (1-9 credits)	
MEE 9994	Preliminary Examination Preparation (1-2 credits)	
MEE 9998	Pre-Dissertation Research (1 credit minimum)	
MEE 9999	Dissertation Research (2 credits minimum)	
<b>Total Credit Hours</b>		<b>30</b>

1

Coursework is typically selected by the student's Doctoral Advisory Committee. It may include up to, but no more than, 3 credits of MEE 9182 Independent Study I, 3 credits of MEE 9282 Independent Study II, or 3 credits of MEE 9991 Directed Research. Furthermore, students who wish to take graduate coursework outside the College of Engineering in one of Temple University's other schools or colleges need to obtain the appropriate written approvals on their Plan of Study form.

2

Sample distribution of the 15 credits associated with PhD examinations and dissertation research is shown, although the actual distribution of credits can vary across courses depending on the student's particular needs. Completion of the required 15 credits includes a minimum of 1 credit but no more than 2 credits of MEE 9994, a minimum of 1 credit of MEE 9998, and a minimum of 2 credits of MEE 9999, with the further stipulation that the minimum number of credits taken in MEE 9994, MEE 9998 and MEE 9999 combined is 6.

### Culminating Events:

#### *Formation of the Doctoral Advisory Committee:*

Selection of a research advisor and formation of a Doctoral Advisory Committee constitute the first steps toward achieving a PhD. Selection of a doctoral advisor depends on the student's level of preparation upon entering the PhD program. The Doctoral Advisory Committee selects the required coursework and guides the progress of the student's dissertation research:

- Students entering the PhD program with a master's degree, i.e., those who must complete 30 credits to earn the degree, form their Doctoral Advisory Committee before the end of their second regular term of study.
- Students entering the program with a bachelor's degree, i.e., those who must complete 60 credits to earn the PhD degree, generally complete most of their coursework before forming their Doctoral Advisory Committee by the end of their fourth regular term in the program.

See Graduate School Policy 02.28.11 (p. 23) for clarification on the composition of the Doctoral Advisory Committee.

#### *Preliminary Examination:*

All students generally complete their didactic coursework prior to taking the preliminary examination. (See Graduate School Policy 02.27.11 (p. 22).) Students in the 30-credit cohort ordinarily take the exam in their third or fourth term. Students in the 60-credit cohort typically take the exam no later than the eighth regular term. Students should register for one credit of MEE 9994 Preliminary Examination Preparation in the term when the exam will be taken.

The preliminary exam tests both the student's core knowledge in Mechanical Engineering and their capacity to synthesize and interpret research communications. The student coordinates the scheduling of the preliminary exam with the ME Graduate Program Director. The ME Graduate Program Director supervises the specific form, content and frequency of the Mechanical Engineering preliminary exam. A maximum of two opportunities to pass the preliminary exam are available to the student. In each term when the exam is attempted, the student registers for one credit of MEE 9994. Students are dismissed upon the second failure.

#### *Dissertation Proposal:*

Within a year of passing the preliminary exam, the student must develop a written research proposal and present it in an open College seminar. Ten business days prior to the presentation seminar, the student must schedule the proposal and post an announcement. Immediately following the seminar, the Doctoral Advisory Committee questions the student about the details and strategy of their proposed research.

Approval is granted for the proposed dissertation research when the "Dissertation Proposal Transmittal for Elevation to Candidacy" form (found in TUportal under the Tools tab within "University Forms") has been signed off by the entire Doctoral Advisory Committee. After the dissertation proposal has been accepted by the Doctoral Advisory Committee and the Graduate School has received the form, the student is considered to be a doctoral candidate. (See Graduate School Policy 02.28.12 (p. 23) for more information.)

#### *Research Credits:*

Students carry out research throughout their studies and register for the corresponding research credits while in the PhD program. However, the type of research credits that a student registers for depends on the student's progress in the program:

- Prior to passing the preliminary exam, credit hours associated with the student's research should be registered under MEE 9991 Directed Research.
- After the preliminary exam is passed, but before elevation to candidacy, credit hours associated with the student's research should be registered under MEE 9998 Pre-Dissertation Research.

- After elevation to candidacy, the student's research credits should be registered under MEE 9999 Dissertation Research. Students are required to register for at least three credits of MEE 9999 following their elevation to candidacy. (See Graduate School Policy 02.28.15 (p. 23).)

**Publications:**

Paper writing and presentation at a conference are considered integral to the student's training. Also, peer review, in part, offers an indication of the quality and novelty of the student's research. All doctoral students must publish at least two technical papers in refereed journals or refereed conferences. The papers must be based on the student's dissertation research with the student as the first author.

**Dissertation:**

The dissertation defense is an open University seminar in which the student presents the concepts and results of their research.

The student must coordinate the formation of the Dissertation Examining Committee in the term that they intend to defend their dissertation. This committee consists of the original Doctoral Advisory Committee plus one additional "external" member who is not faculty in the College of Engineering. If the external examiner is not a member of Temple University's Graduate Faculty, the person must be approved by the Graduate School at least four weeks prior to the dissertation defense.

The dissertation defense is to take place during a regular academic term (i.e., not scheduled during study days, final exams, or the breaks between terms). If the student is to graduate in the same term as the dissertation defense is held, then the defense should take place at least 30 days prior to the end of the term to allow for document revisions.

Three weeks prior to the defense, the members of the committee elect a Chair of the Dissertation Examining Committee. The Chair cannot be the student's doctoral advisor. The Associate Dean of Research and Graduate Studies must approve the selection. The Chair is identified to the Graduate School in the student's official request for permission to schedule the defense. (See Graduate School Policy 02.28.15 (p. 23).) The Chair's role includes coordination of the proceedings of the defense and completion of all relevant College and Graduate School forms concerning the defense.

The dissertation document should be prepared in a format compliant with University standards. (See Graduate School Policy 02.28.18 (p. 23).) A copy of the completed dissertation must be provided to the committee at least three weeks before the date of the dissertation defense. Note that any Graduate Faculty may request a copy of the dissertation in advance of the defense and may participate in the defense.

A minimum of two weeks prior to the defense, a public announcement of the defense must be posted. Prior to posting, this announcement must be approved in writing by the Graduate School. (See Graduate School Policy 02.28.16 (p. 23).)

Immediately following the presentation, the Dissertation Examining Committee closely examines the student's performance and their research. External attendees may participate in this closed portion of the defense with the permission of the Dissertation Examining Committee Chair. However, only members of the Dissertation Examining Committee may actually vote on the decision to accept the dissertation as prepared, accept the dissertation with revisions, or not accept the dissertation. If the dissertation is accepted with revisions, a revised copy of the dissertation

must be submitted and approved by the Committee within 30 days of the original defense date.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/mechanical-engineering-phd-en-me-phd>

**Department Information:**

College of Engineering  
ATTN: ME Programs  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

**Submission Address for Application Materials:**

<https://apply.temple.edu/ENGINEERING/Account/Login>

**Department Contacts:****Admissions:**

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

**Graduate Program Director, ME:**

Kurosh Darvish, PhD  
kurosh.darvish@temple.edu  
215-204-4307

**Interim Chairperson, ME:**

Shih-Jiun (Jim) Chen, PhD  
jsjchen@temple.edu  
215-204-4305

**Graduate Certificate: Advanced Manufacturing and Robotics****COLLEGE OF ENGINEERING**

Learn more about the graduate certificate in Advanced Manufacturing and Robotics.

**About the Certificate**

The innovative graduate certificate in Advanced Manufacturing and Robotics is designed for working engineering professionals. The certificate allows for delivery of critical career skills in 9 credits. Students select graduate coursework in either advanced manufacturing or robotics. This certificate can be "stacked" along with other graduate certificates and an integrative capstone project to earn the Master of Engineering (MEng) degree.

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program.

Please contact the College of Engineering's admissions advisor for more information.

## Admission Requirements and Deadlines

Students are accepted into the certificate program in both the Fall and Spring terms.

*APPLY ONLINE to this graduate program.*

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Code	Title	Credit Hours
Select courses from the following:		9
MEE 5411	Introduction to Mobile Robotics	
MEE 5412	Modern Dynamics for Robotics	
MEE 5413	Robotic Manipulation	
MEE 5643	Manufacturing Engineering	
	Automation in Manufacturing	
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/advanced-manufacturing-and-robotics-certificate-graduate-en-amr-grad>

### Department Information:

Dept. of Mechanical Engineering  
 ATTN: Advanced Manufacturing and Robotics Graduate Certificate  
 1947 N. 12th Street  
 Philadelphia, PA 19122-6077  
[gradengr@temple.edu](mailto:gradengr@temple.edu)  
 215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*  
 Elizabeth Jung  
[elizabeth.jung@temple.edu](mailto:elizabeth.jung@temple.edu)  
 215-204-7800

## Graduate Certificate: Computer and Systems Security

COLLEGE OF ENGINEERING

### About the Certificate

This graduate certificate is not open for enrollment for the 2023-2024 academic year.

## Graduate Certificate: Engineering Management

COLLEGE OF ENGINEERING

Learn more about the graduate certificate in Engineering Management.

### About the Certificate

The graduate certificate in Engineering Management requires 9 credits of coursework that foster the student's understanding of both basic concepts of business management from the perspective of a technology professional and the critical issues around new product development and market success for new technologies. Graduates expand their career prospects by adding business acumen to their engineering expertise.

Coursework is delivered in collaboration with the Fox School of Business and Management. Students must complete one required course in the College of Engineering, but elective courses may be taken in Fox School and/or the College of Engineering. The credits completed for the certificate can also be applied to the Engineering Management MS (p. 309).

**Campus Location:** Main, online, or a combination of in-person and online instruction

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the College of Engineering's admissions advisor for more information.

### Admission Requirements and Deadlines

Students are accepted into the certificate program in both the Fall and Spring terms.

*APPLY ONLINE to this graduate program.*

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Code	Title	Credit Hours
EMGT 5633	Management Principles for Innovators, Engineers and Technologists	3

Select courses from the following totaling 6 credits:	6
EMGT 5631 Design Thinking	
EMGT 5632 Intrapreneurship: Managing the New Product Development Process	
MSOM 5107 Lean, Six Sigma, and the Science of Improvement	
MSOM 5108 Project Management	
Any 5000-level SGM course(s) focused on innovation <sup>1</sup>	
<b>Total Credit Hours</b>	<b>9</b>

1

Course selection requires advisor approval.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/engineering-management-certificate-graduate-en-emgt-grad>

### Department Information:

College of Engineering  
ATTN: Engineering Management Graduate Certificate  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*  
Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

## Graduate Certificate: Engineering Project Management

COLLEGE OF ENGINEERING

Learn more about the graduate certificate in Engineering Project Management.

### About the Certificate

The innovative graduate certificate in Engineering Project Management is designed for working engineering professionals. In addition to learning traditional project management methodologies, students study Agile project management (APM) methodologies, engage with financial analysis to understand the value of a project to the overall organization, and work toward a detailed treatment of the specific leadership challenges facing the project manager. This certificate can be "stacked" along with other graduate certificates and an integrative capstone project to earn the Master of Engineering (MEng) degree.

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the College of Engineering's admissions advisor for more information.

## Admission Requirements and Deadlines

Students are accepted into the certificate program in both the Fall and Spring terms.

*APPLY ONLINE to this graduate program.*

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Code	Title	Credit Hours
EMGT 5634	Project Management Overview and Project Management Essentials	1.5
EMGT 5635	Financial Management for Technologists	1.5
EMGT 5641		1.5
EMGT 5642	Project Management - Project Planning, Implementation and Case Study	1.5
EMGT 5645	Fundamentals of Interpersonal Leadership for Technologists	1.5
EMGT 5647		1.5
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/engineering-project-management-certificate-graduate-en-epm-grad>

### Department Information:

Dept. of Engineering, Technology and Management  
ATTN: Engineering Project Management Graduate Certificate  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*  
Elizabeth Jung  
elizabeth.jung@temple.edu

215-204-7800

*Program Director:*

Thomas V. Edwards, DPS

tuc56565@temple.edu

215-204-7794

## Graduate Certificate: New Product Development

COLLEGE OF ENGINEERING

Learn more about the graduate certificate in New Product Development.

### About the Certificate

The innovative graduate certificate in New Product Development is designed for working engineering professionals. Students gain critical career skills while learning about design thinking principles, the marketing of technological products, and the challenge of producing a reliable pipeline of innovations beyond a single breakthrough. Additionally, students are educated in the engineering management principles required for leadership in new product development. This certificate can be "stacked" along with other graduate certificates and an integrative capstone project to earn the Master of Engineering (MEng) degree.

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the College of Engineering's admissions advisor for more information.

### Admission Requirements and Deadlines

Students are accepted into the certificate program in both the Fall and Spring terms.

*APPLY ONLINE to this graduate program.*

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Code	Title	Credit Hours
EMGT 5631	Design Thinking	1.5
EMGT 5637	Marketing Technological Products and Services	1.5
EMGT 5643		1.5
EMGT 5644		1.5
EMGT 5645	Fundamentals of Interpersonal Leadership for Technologists	1.5
EMGT 5646	Fundamentals of Team Leadership	1.5
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/new-product-development-certificate-graduate-en-npd-grad>

#### Department Information:

Dept. of Engineering, Technology and Management  
ATTN: New Product Development Graduate Certificate  
1947 N. 12th Street  
Philadelphia, PA 19122-6077  
gradengr@temple.edu  
215-204-7800

#### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

#### Department Contacts:

*Admissions:*

Elizabeth Jung  
elizabeth.jung@temple.edu  
215-204-7800

*Program Director:*

Thomas V. Edwards, DPS  
tuc56565@temple.edu  
215-204-7794

## Graduate Certificate: Stormwater Management

COLLEGE OF ENGINEERING

Learn more about the graduate certificate in Stormwater Management.

### About the Certificate

The graduate certificate in Stormwater Management requires 12 credits of coursework that foster the student's expertise in addressing the effects associated with stormwater management. Increased stormwater runoff, causing flooding and erosion in urban stream ecosystems, is a growing environmental issue. Students study the effects of urban runoff on stream channels and learn best practices to prevent degradation of ecosystems. This certificate is an excellent fit for professionals or graduates with:

- an undergraduate engineering degree;
- educational or professional background in environmental science, geomorphology, hydrology or stormwater management; or
- professional experience in civil or environmental engineering, stormwater management, or land development.

Up to nine credits may be applied to the Environmental Engineering MSEnE (p. 311).

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis. NOTE: International students may not be eligible to



apply for a student visa based on admission to the certificate program. Please contact the College of Engineering's admissions advisor for more information.

## Admission Requirements and Deadlines

Students are accepted into the certificate program in the Fall term.

*APPLY ONLINE to this graduate program.*

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
CEE 5641	Urban Streams and Stormwater Management	3
Select one from the following:		3
CEE 5621	Engineering Hydrology	
CEE 5631	Environmental Hydrology	
Select two from the following:		6
CEE 5623	Contaminant Dynamics in Urban Streams	
CEE 5701	Physical Principals of Environmental Systems	
CEE 5703	Mathematical Modeling	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/stormwater-management-certificate-graduate-en-stwm-grad>

### Department Information:

Dept. of Civil and Environmental Engineering  
 ATTN: Stormwater Management Graduate Certificate  
 1947 N. 12th Street  
 Philadelphia, PA 19122-6077  
 gradengr@temple.edu  
 215-204-7800

### Submission Address for Application Materials:

<https://apply.temple.edu/ENGINEERING/Account/Login>

### Department Contacts:

*Admissions:*  
 Elizabeth Jung  
 elizabeth.jung@temple.edu  
 215-204-7800

## Beasley School of Law

Beasley School of Law is committed to excellence in teaching, scholarship and service. The faculty are dedicated to preparing students to work in the legal profession with the highest level of skill possible, with a firm commitment to principles of professional responsibility, and with a sense of personal obligation to lead and serve the communities in which they live and practice. We are dedicated to our traditional ideal of making opportunities for legal education accessible to talented students who might otherwise not have the opportunity and those who might encounter barriers due to race, creed, gender, disability, sexual orientation, gender identity, age, socioeconomic background or other personal characteristics.

The Law School opened in 1895 as Temple College's Department of Law under Dean Henry S. Borneman to prepare students for the bar examination. Initially, 46 students enrolled in evening classes. In 1901, the Law School graduated its first class of 16. In 1907, it received accreditation from the Pennsylvania State Board of Bar Examiners.

In 1933, the Law School created a three-year day division, also receiving full accreditation and an "A" rating from the Council on Legal Education of the American Bar Association. The Law School was admitted to full membership in the Association of American Law Schools in 1935. By 1943, however, the school was on the brink of closure, having experienced a deep decline in enrollment and severe financial difficulties. Judge Charles Klein worked closely with a group of dedicated alumni and professors to save the school from collapse.

Under the leadership of Dean Peter J. Liacouras in the 1970s and 1980s, the Law School greatly expanded its programs. It prospered under Dean Robert Reinstein, who served from 1989 to 2008. In 1999, to express gratitude for one of the largest gifts ever given to an American law school, the Law School took on the name of its alumnus and benefactor, James E. Beasley. The availability of Beasley scholarships, together with Law Faculty, Conwell, and Public Interest scholarships, continues to draw a bright, diverse student body.

In 2009 under Dean JoAnne Epps, the Law School was selected by the Robert Wood Johnson Foundation to house its new \$19 million Public Health Law Research Program devoted to funding research focused on the influence of law on population health. That year, Beasley School of Law also established the Conwell Community Corps, offering recent graduates full-time, paid four- to six-month positions with Philadelphia area public interest agencies. The leadership of Dean Epps during the economic downturn in the years following 2009 drew national attention to Temple Law and to her as an influential voice within legal education.

In 2013, the Sheller Center for Social Justice at Beasley School of Law was founded to partner with local community advocacy organizations to address civil access to justice issues confronting underserved populations. The Law School seeks to maintain and strengthen a longstanding tradition of accessibility and diversity in order to pursue the goals of excellence in higher education and equal justice under the law.

In 2016, Gregory Mandel, Peter J. Liacouras Professor of Law, was named Dean. He is a leading international scholar on intellectual property law, innovation and the interface among technology and law who, in 2021, was promoted to Provost.

Most recently, in July 2022, Rachel Rebouché, James E. Beasley Professor of Law, was appointed Dean of the Beasley School of Law.

She is a leading scholar on reproductive health law, feminist legal theory and family law.

## Graduate and Professional Programs and Certificates

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- American and International Law - China LLM (p. 331)
- Asian Law LLM (p. 333)
- Law JD (p. 336)
- Law SJD (p. 339)
- Legal Education LLM (p. 341)
- Taxation LLM (p. 341)
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- Transnational Law LLM (p. 343)
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- Graduate Certificate: American Legal Studies (TU Japan only) (p. 346)
- Graduate Certificate: Employee Benefits Law (p. 347)
- Graduate Certificate: Estate Planning (p. 348)
- Graduate Certificate: International Business and Compliance (p. 349)
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- Juris Doctor Certificate: Business Law (p. 351)
- Juris Doctor Certificate: Trial Advocacy and Litigation (p. 353)

## Graduate Faculty

*Laura E. Little*, James G. Schmidt Professor of Law, Department of Law, Beasley School of Law; JD, Temple University Beasley School of Law.

*Gregory N. Mandel*, Professor, Department of Law, Beasley School of Law; JD, Stanford Law School.

## American and International Law LLM

BEASLEY SCHOOL OF LAW

### About the Program

The Master of Laws (LLM) in American and International Law is designed for foreign-trained lawyers. It is equivalent to a "General" or "Traditional" LLM or an "LLM in American Law." Temple's program is appropriate for international attorneys; legal academics, counsel, and government officials; recent law graduates; and those who have earned a first degree in law.

Our LLM program is one of the longest running in the United States, with alumni around the world. *U.S. News & World Report* ranks Temple Law as a top law school, particularly in healthcare law, international law, legal writing, tax law and trial advocacy. Courses within our specialty rankings are popular with international students.

At Temple University's Beasley School of Law, LLM students take courses together with Juris Doctor (JD) students, becoming part of a tight-knit community. Students earn degree credits at our main campus in Philadelphia, where living is affordable. Strategically located on the East Coast of the United States, Philadelphia is close to both New York City

to the north and Washington, D.C. to the south. Students may also earn degree credits at our campuses in Rome, Italy and Tokyo, Japan.

This general legal studies degree program includes two required courses (JUDO 0414 Legal Research & Writing and JUDO J425 Introduction to the American Legal System), an advanced writing course, a first-year JD course, and a series of elective law subjects. Students, in consultation with the program director, select electives based on their interests.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main campus in Philadelphia and abroad in Rome, Italy and Tokyo, Japan

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Job Prospects:** Although most U.S. states require applicants to hold a JD degree to seek admission to the Bar, some U.S. states have historically permitted graduates of an LLM program who do not hold a JD degree to sit for the bar examination. Those individuals must meet other requirements related to both their prior degree and the types of credits earned during the LLM program. For more information, visit Taking the Bar Exam. Most of our LLM graduates return to their home countries shortly after graduation.

Further education may be an option, although one's admission to and/or awarding of the LLM does not guarantee admission to the JD program. Main campus LLM graduates may only be considered for JD admission with transfer credit if they demonstrate an excellent LLM grade point average or present a competitive LSAT score. LLM graduates who want to apply to Temple's SJD program must satisfy that program's independent admission requirements.

**Non-Matriculated Student Policy:** Students must be matriculated in the program to take courses.

**Financing Opportunities:** Temple Law offers partial tuition scholarships based on need and merit. The amount of any award offered is only shared after a final admissions decision has been made. Even without financial aid, Temple's LLM tuition is highly competitive when compared to tuition at other U.S. law schools. For more information, visit our Financial Aid webpage.

## Admission Requirements and Deadlines

### Application Deadline:

For applicants to the *Philadelphia, Pennsylvania, USA* program:

*Fall:* March 15  
*Spring:* October 1

For applicants to the *Rome, Italy* program:

*Summer:* May 1

For applicants to the *Tokyo, Japan* program who *do not need* a student visa:

*Fall:* July 1  
*Spring:* November 1  
*Summer:* April 1

For applicants to the *Tokyo, Japan* program who *need* a student visa:

*Fall:* April 15  
*Spring:* September 10  
*Summer:* January 15

### Student Visa Application Deadline:

*Fall:* May 15  
*Spring:* October 10  
*Summer:* February 15

Applicants are admitted on a rolling basis and are encouraged to apply as early as possible while space is available in the program. The application deadline may be extended upon request.

Payment of the \$50 application fee may be remitted directly to Temple Law by check or money order payable to "Temple University." The application fee may be waived upon request.

### NOTES:

1. *All documents must be submitted in English. Submit both the originals and translated versions whenever relevant.*
2. *If you have already submitted an admissions application through the Law School Admission Council (LSAC), please do not submit an application at the links below. Your application in the LSAC system is already in process.*

*APPLY ONLINE to this program in Philadelphia, Pennsylvania, USA.*

*APPLY ONLINE to the summer program in Rome, Italy, where up to 5 credits can be earned in classes taught in English by American and European law professors that can later be applied toward the American and International Law LLM degree.*

*APPLY ONLINE to this program in Tokyo, Japan.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* The reference letters may be written by a professor and/or employment supervisor and should candidly evaluate the applicant's academic abilities and/or professional skills. Relevant work experience may also be considered evidence of potential for graduate study.

**Degree Required for Admission Consideration:** All matriculants to the LLM program must have earned a first degree in law, such as an LLB, outside the United States. Official law transcripts or proof of passage of home country lawyer license examination must be submitted either electronically or as hard copy received in a sealed envelope from the issuing institution, with English translation if needed. Translations must be certified by a credentialed evaluation service.

**Statement of Goals:** Outline your interest in the program in a one- to two-page personal statement. Applicants should explain their interest in graduate study, as well as any other factors the admissions committee should take into consideration when evaluating their application. The statement should demonstrate the applicant's organizational, analytical and writing skills. Thus, applicants should invest appropriate time and effort in preparing this statement. The personal statement is carefully evaluated by the admissions committee.

### Standardized Test Scores:

Unless a waiver is provided, lawyers trained in a non-English-speaking country must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88 (send officially using TOEFL code 2906, department code 03)
- IELTS Academic: 6.5, with no individual score below 6.0
- Duolingo: 115

The score requirement is waived for applicants whose native language is English or who earned a degree from an institution where the language of instruction was English.

**Resume:** Current resume or CV is required.

**Interview:** An interview is not required, but prospective applicants are welcome to visit or schedule an informal video chat so that questions about the program may be answered.

**Other Requirement:** All students are required to attend an LLM orientation session. A two-week session is held in August for Fall admits. In limited cases, a one-week session is held in January for Spring admits. Students take an introductory course on the American legal system and participate in other lectures and workshops in preparation for studying law in the United States. During orientation, students meet classmates, faculty, deans and other members of the Temple community and learn about Temple's opportunities and resources.

## Program Requirements

### General Program Requirements

*Number of Credits Required to Earn the Degree: 24*

Code	Title	Credit Hours
<b>Core Courses</b>		
JUDO 0402	Civil Procedure I	3-4
	or JUDO 0404 Constitutional Law	
	or JUDO 0406 Contracts	
	or JUDO 0410 Criminal Law I	
	or JUDO 0418 Property	
	or JUDO 0420 Torts	
JUDO 0414	Legal Research & Writing	3
	or JUDO J414 Legal Research & Writing	
JUDO 0415	Adv Legal Research/Writing <sup>1</sup>	2-3
JUDO J425	Introduction to the American Legal System	3
<b>Electives</b>		
Select courses from the following totaling 11-13 credits:		13-11
JUDO 0416	Professional Responsibility	
	or JUDO 086 Professional Responsibility	
JUDO 0437	Introduction to Transactional Skills	
JUDO 0440	Unincorporated Business Organizations: Agency, Partnerships and LLC's	
JUDO 0490	Doing Business on the Internet: The Law of E-Commerce	
JUDO 0497	International Health Law	
	or JUDO 095 International Health Law	
JUDO 0508	Corporations	
JUDO 0511	Corporate Taxation	
JUDO 0556	International Law	
JUDO 0622	Sales	
	or JUDO 096 Sales	

JUDO 0654	Business Immigration Law
JUDO 0665	International Criminal Law
JUDO 1029	Advanced Financial Regulation: Corporate Scandals and Crises
JUDO 1046	International Investment Law and Arbitration
JUDO 1052	International Compliance
JUDO 1055	Treaties and Negotiations
JUDO 1068	International Human Rights of Children
JUDO 5042	Introduction to Compliance and Ethics

**Total Credit Hours** **24**

1

JUDO 0415 fulfills the requirement for a second writing course. Alternately, students may substitute a JD writing seminar for this course.

**Cumulative GPA Required to be Awarded the Degree:** 2.0 minimum

## Contacts

### Program Web Address:

<https://law.temple.edu/academics/degrees/llm-foreign-trained/>

### Department Information:

Office of Graduate and International Programs  
 Temple University Beasley School of Law  
 1719 N. Broad Street, 710 Klein Hall  
 Philadelphia, PA 19122-6002  
 intl@law.temple.edu  
 215-204-1448  
 Fax: 215-204-2282

### Mailing Address for Application Materials:

Office of Graduate and International Programs  
 Temple University Beasley School of Law  
 1719 N. Broad Street, 710 Klein Hall  
 Philadelphia, PA 19122-6002

## American and International Law - China LLM

BEASLEY SCHOOL OF LAW

### About the Program

In 1999, Temple University launched a Master of Laws degree (LLM) program in Beijing to educate public and private sector legal professionals in U.S. and international law. This program, in collaboration with Tsinghua University School of Law, is the first foreign law degree granting program approved by the Chinese Ministry of Education.

The Temple-Tsinghua LLM degree program provides Chinese legal professionals and law students with the knowledge and skills essential to meet the changing and growing legal demands of today's global landscape. Graduates receive an LLM degree from Temple University. The program is approved by the Ministry of Education of the People's Republic of China and acquiesced by the American Bar Association.

The program begins with a required one-month intensive Legal English course that prepares students for law school coursework. Students may request to be exempted from the course if they work in a full-time English-

language environment and earn sufficiently high scores on the English assessment exam used for admission purposes. The Legal English program consists of:

- American Legal System
- Case Briefing
- Law School Skills
- Listening and Speaking in Law

Courses taught in Beijing focus on principal areas of American law studied by Juris Doctor (JD) students in the United States, with course offerings in civil, criminal and commercial law.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Tsinghua Law School in Beijing, China and Main campus in Philadelphia

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** During the Summer session in Philadelphia, students continue coursework; participate in interactive visits to the courts, law firms and government agencies; and visit cultural sites. Courses are taught in English by Temple and Tsinghua law faculty and adjunct professors who are expert practitioners in their fields.

**Job Prospects:** Graduates may have an advantage in procuring jobs that require China-focused international law study and experience.

**Non-Matriculated Student Policy:** Students must be matriculated in the program to take courses.

**Financing Opportunities:** The degree program does not have a scholarship program, but students may explore financial aid opportunities commonly available to other law students. Tuition and cost information is available at <https://law.temple.edu/academics/degrees/llm-china/tuition-cost/>. For financial aid information, visit <https://law.temple.edu/resources/financial-aid/graduate-international/>.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* August 1

Applicants are admitted on a rolling basis. Late applications may be accepted if space is available.

Payment of the CNY 300 yuan may be remitted directly to the Temple-Tsinghua LLM program office in Beijing.

*APPLY ONLINE to this program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* The reference letters must be written by law professors or legal employers who are well acquainted with your academic abilities and/or professional skills.

**Degree Required for Admission Consideration:** All matriculants to the LLM program must be current students in the Tsinghua University School of Law Juris Master program or have earned an LLB, LLM or higher law degree. Alternately, individuals who have passed the Chinese National Judicial Examination may apply for the program. Official transcripts and

certificates of law degree completion must be submitted to Temple Law either electronically or as hard copy received in a sealed envelope from the issuing institution, accompanied by the certified English translation if needed. Transcripts that have been opened and handled by the applicant are not considered acceptable.

**Statement of Goals:** This carefully worded personal statement should include your personal history, professional interests and abilities, as well as any other information that might be helpful to the Admissions Committee. The committee wants to know each applicant as a person and as a professional. Each statement must be signed and dated to certify that the essay is true and your own work.

### Standardized Test Scores:

LSAT: Not required.

Unless a waiver is provided, applicants trained in a non-English-speaking country must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5, with no individual score below 6.0
- Duolingo: 115

The score requirement is waived for applicants whose native language is English or who earned a degree from an institution where the language of instruction was English.

**Interview:** An interview may be requested by the Admissions Committee.

## Program Requirements

### General Program Requirements

*Number of Credits Required to Earn the Degree:* 24<sup>1</sup>

Code	Title	Credit Hours
<b>Core Courses</b>		
MLAI C404	Constitutional Law	
MLAI C405	Legal Profssnlsm Practcm	
MLAI C406	Contracts I	
MLAI C414	Legal Research & Writing	
MLAI C415	Legal Research	
MLAI C418	Real Property	
MLAI C420	Torts	
MLAI C422	Legal Reasoning	
MLAI C451	Intro to Trial Advocacy	
MLAI C508	Business Associations	
<b>Electives</b>		
MLAI C402	Civil Procedure I	
MLAI C416	Professional Responsibility	
MLAI C450	Mergers & Acquisitions	
MLAI C505	Criminal Procedure	
MLAI C522	Conflict of Laws	
MLAI C524	International Commercial Arbitration	
MLAI C540	Evidence	
MLAI C545	Introduction to Compliance	
MLAI C547	Intellectual Property	

MLAI C637 International Business Transactions

**Total Credit Hours** 24

1

Listed course offerings are representative and may vary from year to year.

**Cumulative GPA Required to be Awarded the Degree:** 2.0 minimum

## Contacts

### Program Web Address:

<https://law.temple.edu/academics/degrees/llm-china/>

### Department Information:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002  
intllaw@temple.edu  
215-204-1448  
Fax: 215-204-2282

### Mailing Address for Application Materials:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002

## Asian Law LLM

BEASLEY SCHOOL OF LAW

### About the Program

Temple Law has always taken great pride in providing an excellent legal education that prepares its graduates for the challenges they will meet in practice. Globalization has significantly changed the nature of these challenges. In the decade that U.S. trade across the Pacific surpassed that across the Atlantic, clear recognition arose in the legal profession that Asia is an area of practice in which lawyers should receive special training. The growing number of commercial Asia-U.S. transactions continues to flame both domestic and foreign demand for U.S. lawyers who specialize in Asian law. While this demand continues and will likely grow, only a limited number of academic programs in the United States exist that are specifically designed to create such specialists.

This program is designed primarily for those who hold a Juris Doctor (JD) degree, potential JD students, and lawyers from foreign common law jurisdictions who would use Temple's curricular strengths and existing programs as a bridge to expand their careers to Asia, the most dynamic region in the 21st-century world.

The Beasley School of Law has long regarded its international law programs as a core center of excellence. Indeed, our expertise in international law generally is reflected in our strong national ranking in that area. Our substantive depth and our existing physical presence in the capitals of the nations with the three largest economies in Asia make us the program of choice for those wishing to become Asian law specialists. Our program is unique in requiring candidates to spend a semester at a law school program in Asia, ensuring that graduates of the program are exposed not just to substantive aspects of the law, but to

the almost equally important nuances of the legal, economic and social culture from which those laws spring.

Our tenured faculty specialize in Chinese Law, Japanese Law, and legal issues in Asia. Our roots run deep in legal education in Asia. In 1994, we became the only U.S. law school to offer a full semester of JD study and a full academic year for LLM students in Asia at Temple University's Japan campus in Tokyo. In 1999, the Beasley School of Law expanded into China in a groundbreaking program to train Chinese lawyers, judges and professors. In addition, we send students every fall to study Chinese Law in Tsinghua University's LLM in Chinese Law program for non-Chinese students. In 2011, Temple entered into an exchange partnership with Jindal Global University Law School in National Capital Region (NCR) of Delhi, India.

**Time Limit for Degree Completion:** 4 years, although full-time students typically complete the LLM program in one academic year

**Campus Location:** Main campus in Philadelphia and abroad in Beijing, China; Delhi, India; or Tokyo, Japan

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Students may pursue the Asian Law LLM on its own or in conjunction with the JD. A Temple JD student may qualify for entry into the LLM program before graduation, and earn up to half of the required 24 credits for the LLM while still a JD student. The remaining credits required for the LLM degree can then be completed in one additional full-time semester or several part-time semesters in Philadelphia, China, India or Japan after satisfying the JD requirements. Current Temple JD students who enter the JD/LLM program directly after earning a JD automatically have up to six credits of eligible courses in a Temple program applied toward the LLM in Asian Law. For each additional credit earned beyond the minimum number of credits required to earn the JD degree, a Temple JD/LLM student can apply one more credit of international and comparative law coursework toward the LLM in Asian Law, up to a maximum of 12 credits.

**Job Prospects:** Graduates may have an advantage in procuring jobs that require Asia-focused international law study and experience.

**Non-Matriculated Student Policy:** Students must be matriculated in the program to take courses.

**Financing Opportunities:** The Asian Law LLM degree program does not have a scholarship program, but students may explore financial aid opportunities commonly available to JD students. Tuition and cost information is available at <https://law.temple.edu/about/tuition/>. For financial aid information, visit <https://law.temple.edu/resources/financial-aid/graduate-international/>.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* June 1

*Spring:* November 1

Applicants are admitted on a rolling basis and are encouraged to apply as early as possible while space is available in the program. Payment of the \$50 application fee may be remitted directly to Temple Law by check or money order payable to "Temple University." The application fee is waived for current Temple students.

APPLY ONLINE to this program.

**Letters of Reference:**

Number Required: 1

*From Whom:* The reference letter may be written by a professor or employment supervisor and should candidly evaluate the applicant’s academic abilities and/or professional skills. Relevant work experience may also be considered evidence of potential for graduate study.

**Degree Required for Admission Consideration:** It is expected that applicants hold a Juris Doctor or equivalent first degree in law from an English common law country. Official law transcripts must be submitted either electronically or as hard copy received in a sealed envelope from the issuing institution, with English translation if needed.

**Statement of Goals:** Outline your interest in the program in a maximum of 1,000 words. Applicants should explain their interest in graduate study in Asian law, as well as any other factors the admissions committee should take into consideration when evaluating their application. The statement should demonstrate your organizational, analytical and writing skills. Thus, applicants should invest appropriate time and effort in preparing this statement. The personal statement is carefully evaluated by the admissions committee. While proficiency in an Asian language is preferred, it is not required.

**Resume:** Current resume or CV is required.

## Program Requirements

**General Program Requirements**

Number of Credits Required to Earn the Degree: 24

Code	Title	Credit Hours
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**Fall Semester Core Courses**

Select two or three from the following Asian Law courses on Main campus: 6

JUDO 0900	Guided Research	
or JUDO 0903	Guided Research II	
or JUDO 0902	Guided Research Serial	
or JUDO 0903	Guided Research II Serial	
or JUDO A900	Guided Research	
or JUDO A902	Guided Research Serial	
or JUDO J900	Guided Research	
or JUDO J902	Guided Research Serial	
or JUDO J904	Guided Research II	
or JUDO J905	Guided Research II Serial	
or JUDO R900	Guided Research	
or JUDO R903	Guided Research II	
or JUDO R902	Guided Research Serial	
or JUDO R903	Guided Research II Serial	
or MLAI C900	Guided Research	
JUDO 0925	Japanese Law	
or JUDO J11	Intro to Japanese Law	
or JUDO J11	Current Issues in Japanese Law	
or JUDO J91	Introduction to Japanese Law	
JUDO 0989	Law in Asia	
JUDO 1024	Chinese Law	

or JUDO J11	Intro Chinese Law	
Select two or three from the following International Law courses on Main campus: 1		6
JUDO 0444	National Security Law	
or JUDO 091	National Security Law	
or JUDO J42	National Security Law	
or JUDO J91	National Security Law	
JUDO 0453	Law of the European Union	
or JUDO 0934	Law of European Union	
JUDO 0459	International Commercial Mediation and Arbitration	
JUDO 0467	International Intellectual Property	
or JUDO J467	International Intellectual Property	
or JUDO R467	International Intellectual Property	
JUDO 0494	Advising the Multinational Company on Global Legal Issues	
or JUDO J494	Advising the Multinational Company on Global Legal Issues	
or JUDO R494	Advising the Multinational Company on Global Legal Issues	
JUDO 0497	International Health Law	
or JUDO 0997	International Health Law	
JUDO 0509	Comparative Constitutional Law	
JUDO 0514	Intl Commercial Trans	
or JUDO 0637	International Commercial Transactions	
or JUDO 0895	Intl Commercial Transctn	
or JUDO A637	Intl Commercial Transctn	
or JUDO J637	International Commercial Transactions	
or JUDO T637	Intl Commercial Transctn	
JUDO 0518	Comparative Law	
or JUDO 081	Comparative Law: China	
or JUDO 081	Comparative Law	
or JUDO J81	Comparative Law	
JUDO 0550	Immigration Law	
or JUDO 0750	Immigration Law	
or JUDO R500	Immigration Law	
JUDO 0556	International Law	
or JUDO J51	International Law	
or MLAI C55	International Law	
JUDO 0571	International Taxation	
or JUDO 0935	International Taxation	
or JUDO J571	International Taxation	
or MLTX G571	International Taxation	
JUDO 0583	International Protection of Human Rights	
or JUDO 082	International Protection of Human Rights	
or JUDO J51	International Protection of Human Rights	
or JUDO J92	International Protection of Human Rights	
or MLAI C58	Intl Protctn Human Right	
JUDO 0612	Constitutional Law and Foreign Policy	
or JUDO 0872	Constitutional Law and Foreign Policy	
JUDO 0642	International Organizations	
or JUDO J62	International Organizations	
JUDO 0651	U.S. Business Planning for International Transactions	

	or JUDO J653 Business Planning for International Transactions
JUDO 0654	Business Immigration Law
JUDO 0659	The Global Workplace
	or JUDO 0955 The Global Workplace
	or JUDO J959 The Global Workplace
JUDO 0665	International Criminal Law
	or JUDO J101 Intrnl Criminal Law
	or JUDO R404 Intrnl Criminal Law
JUDO 0691	International Financial Law
	or JUDO J110 International Finance
JUDO 0881	Intl Investment & Trade
	or MLAI C55 Intl Investment & Trade
JUDO 0912	International Law Colloquium
JUDO 0991	International Development Law and Policy
	or JUDO J65 International Development and Policy Law
	or JUDO J95 International Development and Policy Law
JUDO 1003	Refugee Law and Policy
JUDO 1018	Immigrant Low Wage Workers in a Global Economy
JUDO 1022	Foundations of International Criminal Law
	or JUDO R404 Foundations of International Criminal Law
JUDO 1054	Regulating Cyberthreats
	or JUDO J952 Regulating Cyberthreats
JUDO 1055	Treaties and Negotiations
JUDO 1064	International Trade Law
	or JUDO 506 International Trade Law
	or JUDO J55 International Trade Law
JUDO 5024	International Commercial Arbitration
	or MLAI C524 International Commercial Arbitration
JUDO 5055	Comparative Criminal Procedure
	or JUDO J101 Compartv Criminal Procdr
	or JUDO J95 Comparative Criminal Procedure
JUDO A550	Comparv Immigration Law
	or JUDO J550 Comparative Immigration Law
JUDO A651	Intl Dispute Resolution
	or JUDO J55 International Dispute Resolution
	or JUDO R55 Intl Dispute Resolution
	or MLAI C50 Intl Dispute Resolution
JUDO J102	Intro to Japanese Law
	or JUDO J906 Introduction to Japanese Law
JUDO J104	East/West Negotiation <sup>2</sup>
JUDO J105	Current Issues in Japanese Law <sup>2</sup>
JUDO J115	Comparv Competition Law
JUDO J118	International Entertainment Law
JUDO J424	International Civil Litigation
	or JUDO R404 Intrnl Civil Litigation
	or MLAI C42 International Civil Litigation
JUDO J427	Intro Intl Business Law
	or JUDO R427 Introduction to International Business Law
	or JUDO T500 Intro Int'l Business Law
JUDO J446	Intl IP Licensing
JUDO J464	International Contract Drafting

	or JUDO J924 International Contract Drafting
	or JUDO R404 Intrnl Contract Drafting
JUDO J502	International Trade Contracts
JUDO R430	Intl Human Rts/US Litgn
<b>Spring Semester Abroad Courses</b>	
Select courses at one non-U.S. location totaling 12 credits <sup>3</sup>	
<b>Total Credit Hours</b>	<b>24</b>

1

The list of approved International Law courses is subject to change annually at the Program Director's discretion.

2

JUDO J104 and JUDO J105 are offered only at Temple University Japan.

3

See the course grid for study abroad locations below for approved course offerings taught in English.

## Spring Semester Courses by Location Abroad

Code	Title	Credit Hours
<b>Tsinghua University School of Law, Beijing, China <sup>1</sup></b>		<b>12</b>
	Chinese Banking Law	
	Chinese Civil Procedure	
	Chinese Contact Law	
	Chinese Foreign Trade and Investment Law	
	Chinese Intellectual Property Law	
	Chinese Practice of International Law	
<b>O.P. Jindal Global University Law School, National Capital Region of Delhi, India <sup>2</sup></b>		<b>12</b>
	Administrative Law and the Regulatory State	
	Civil Procedure Code and Law of Limitation	
	Clinic I – Drafting, Pleading and Conveyancing	
	Clinic II – Drafting, Pleading and Conveyancing	
	Constitutional Law I	
	Contract Law II – Special Contract	
	Corporate Law	
	Criminal Procedure Code, Juvenile Justice Act and Probation of Offenders Act	
	Environmental Law	
	Family Law I	
	Intellectual Property Law	
	International Criminal Law	
	International Law and Terrorism	
	International Trade Law	
	Introduction to Banking and Finance Law	
	Jurisprudence	
	Labor Law	
	Law of Contract I	
	Law of Evidence	
	Law of Taxation	
	Law Stream (Business Law)	
	Public International Law	



**Temple University Japan Campus, Tokyo, Japan**<sup>3</sup> 12

JUDO 0467 International Intellectual Property  
or JUDO J46 International Intellectual Property  
or JUDO R46 International Intellectual Property

JUDO 0556 International Law  
or JUDO J556 International Law  
or MLAI C556 International Law

JUDO 0571 International Taxation  
or JUDO 093 International Taxation  
or JUDO J57 International Taxation  
or MLTX G5 International Taxation

JUDO 0583 International Protection of Human Rights  
or JUDO 084 International Protection of Human Rights  
or JUDO J583 International Protection of Human Rights  
or JUDO J927 International Protection of Human Rights

JUDO 0642 International Organizations  
or JUDO J64 International Organizations

JUDO J102 Intro to Japanese Law  
or JUDO J900 Introduction to Japanese Law

JUDO J104 East/West Negotiation<sup>4</sup>

JUDO J105 Current Issues in Japanese Law<sup>4</sup>

JUDO J464 International Contract Drafting  
or JUDO J92 International Contract Drafting  
or JUDO R46 Intrnl Contract Drafting

JUDO J651 Business Planning for International Transactions

JUDO J900 Guided Research  
or JUDO J900 Guided Research Serial  
or JUDO J900 Guided Research II  
or JUDO J900 Guided Research II Serial

1

Tsinghua is a well-recognized Chinese university with a large law school that primarily enrolls domestic Chinese students. Asian Law LLM students with sufficient language proficiency may petition to take courses taught in Chinese to count toward the degree.

2

Jindal's law school primarily enrolls domestic Indian students earning their LLB, a graduate law degree equivalent to the JD in the United States. While the courses available to Asian Law LLM students do not explicitly include the word "Indian" in their titles, they do indeed focus on Indian law.

3

Courses identified for TUJ are commonly taught in Tokyo. JUDO J105 is the only course on the list that is not offered in English.

4

JUDO J104 and JUDO J105 are not offered on Temple University's Main campus.

## Contacts

### Program Web Address:

<https://law.temple.edu/academics/degrees/llm-asian-law/>

## Department Information:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002  
farlistcity.el-baker@temple.edu  
215-201-1073  
Fax: 215-204-2282

## Mailing Address for Application Materials:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002

## Department Contacts:

*Office Manager:*  
Farlistcity El-Baker  
farlistcity.el-baker@temple.edu  
215-204-1073

## Law JD

BEASLEY SCHOOL OF LAW

## About the Program

The Juris Doctor (JD) is a professional degree required to practice law in the United States. At Temple University, students can earn a JD in three years in the full-time division or in four years in the evening and part-time divisions.

Temple's JD program delivers the knowledge, skills, experience and professionalism necessary to excel at the practice of law. Diverse doctrinal, experiential and integrated courses, all led by accomplished faculty, ensure that every Temple student has access to a world-class legal education, no matter what their area of interest.

Students who are currently enrolled in the JD program may take and apply coursework for the Transnational Law LLM degree toward the Juris Doctor. These students may then qualify for the JD/LLM degree. While this is not a concurrent degree, current JD students may earn up to half of the credits toward the LLM degree. A JD/LLM student who earns 88 credits, the minimum number of credits required for a JD degree, may apply up to 6 credits from eligible international law courses, exclusive of International Law, toward an LLM. For each additional credit a student earns beyond the minimum number of credits for a JD degree, the student can apply 1 additional credit from eligible international courses toward an LLM, up to a maximum of 12 credits.

**Time Limit for Degree Completion:** In accordance with the Faculty Regulations, students must complete the academic requirements necessary for the degree within 6 years. Those taking an authorized leave of absence for active military duty may exceed 6 years.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The program may be completed on a full- or part-time basis.

**Job Prospects:** Graduate employment outcome reports submitted to the American Bar Association (ABA®) and National Association for Legal

Support Professionals (NALS) for the previous three years are posted annually on the Beasley School of Law website. These reports contain details about the employment outcomes of graduates at ten months post-graduation.

**Financing Opportunities:** Students may contact the Temple Law Financial Aid Office via e-mail ([lwfinaid@temple.edu](mailto:lwfinaid@temple.edu)) or phone (215-204-8943 or 800-560-1428) for information about financial aid.

## Admission Requirements and Deadlines

**Application Deadline:** March 1

The application form must be completed and mailed to Temple Law School or electronically transmitted to the Law School Admission Council (LSAC®) on or before the March 1 deadline.

Applicants are encouraged to apply electronically through LSAC®'s online application. Applicants may also either download the Temple Law School Admissions Application form from the Beasley School of Law website or request that the application form be mailed to them by contacting the Temple Law Admissions Office at 800-560-1428.

### Application Fee and Waiver:

The application fee is \$65. Payment may be made by credit card if the application is submitted electronically. For applications submitted by mail, a check or money order should be made payable to Temple University and must be drawn on a U.S. bank. The application fee is nonrefundable and cannot be credited toward any charges if an applicant subsequently registers as a student.

Applicants for whom paying the application fee may present a financial hardship may request a waiver of the application fee by e-mailing their name and LSAC® account number to the Temple Law Admissions Office at [lawadmis@temple.edu](mailto:lawadmis@temple.edu). The Beasley School of Law application fee will automatically be waived for any applicant who has been approved for a fee waiver from LSAC®.

### Letters of Reference:

*Number Required:* 4 maximum

*From Whom:* Letters of recommendation should be obtained from professors or employers directly acquainted with the applicant's academic or professional capabilities.

Letters of recommendation may be sent directly from the recommender to LSAC® for distribution with an applicant's law school reports to the law schools to which the applicant is applying or may be sent directly to the Temple Law Admissions Office. Applicants should not have any recommender send the same letter to both LSAC® and Temple. Letters sent directly to Temple should be accompanied by a Letter of Recommendation Waiver Form. This form should be completed by the applicant and provided to the author of each letter of recommendation.

The Family Educational Rights and Privacy Act (FERPA) of 1974, also known as the Buckley Amendment to the General Education Provisions Act, gives students who register at Beasley School of Law the right to inspect and review the letter(s) of recommendation contained in their law school records, unless that right is waived and the applicant consents to the letter(s) remaining confidential communication between the law school and the writer. Applicants may waive the right of access provided by that legislation, but are not required to waive the right as a condition for admission to the law school. If a letter of recommendation is received by the Beasley School of Law unaccompanied by a waiver form executed

by the applicant and the author of the letter, the letter is treated as confidential communication between the writer and the law school.

**Degree Required for Admission Consideration:** All matriculants to the JD program must have earned a baccalaureate degree from an institution approved by one of the regional accrediting associations of the United States. If an applicant presents a degree from an institution situated outside the United States (other than a Canadian affiliate), the academic work required by the awarding institution must be the equivalent of a baccalaureate degree from an accredited institution situated within the United States.

All applicants must provide transcripts from each graduate or professional school attended. Official transcripts of all graduate and professional school courses can be sent either to LSAC®'s Credential Assembly Service (CAS) or directly to the Temple Law Admissions Office.

**Personal Statement:** All applicants must submit a personal statement with the application form. The personal statement provides an opportunity for applicants to present themselves, their background, their experiences and their ideas to the Admissions Committee. Applicants may want to write about intellectual interests, career goals, achievements, family background or involvement in the community.

**Law School Admission Test (LSAT):** All applicants are required to have taken the LSAT within five years of applying for admission and are required to have their scores reported to Temple Law School as part of an LSAC®'s CAS Law School Report. The Beasley School of Law registration code number is 2906.

**Law School Credential Assembly Service (CAS):** All applicants must register with LSAC®'s CAS for the academic year during which application is made. It is the applicant's responsibility to have a transcript from each college or university attended sent directly to LSAC®.

CAS analyzes and duplicates the transcript(s) and sends an unofficial copy to the Beasley School of Law. Applicants who have not yet completed their undergraduate work are encouraged to send updated transcripts to LSAC® upon completion of each semester/quarter so that the Admissions Committee has the most up-to-date academic record when reviewing an applicant's credentials.

Detailed information on registering with CAS and for the LSAT is available on the LSAC® website (<https://www.LSAC.org/>).

**Resume:** While a resume is not required, applicants are encouraged to submit one as part of their application materials. The resume need not be limited to one page. Applicants are asked to include work history even if they think it is not relevant to the legal field.

**Application Processing and Notification of Decision:** Applicants are notified via e-mail when the application and fee have been received and processed. The e-mail also provides login information for the Temple Law Admissions Office's Online Status Check, which allows applicants to check on receipt of letters of recommendation by the Admissions Office and to review their application and decision statuses.

An application is considered complete when a completed application form and current CAS report containing LSAT score(s) and college records have been received. Based on past experience, candidates whose files are complete before January 15 may have a more favorable chance of admission if they are competitive within the applicant pool. Most applicants can expect notification of a decision eight to ten weeks after their file is complete. Delays in the evaluation process may occur,

however, if additional information is requested and/or January or March LSAT scores are awaited.

Admissions decisions are made from December until June as files are completed. All applicants are notified via e-mail of their admissions decision.

An acceptance packet is mailed to all admitted students with instructions on accepting their seat in the entering class. To reserve a place in the entering class, an accepted applicant must submit two nonrefundable admission deposits by the posted deadlines. Both deposits are credited toward tuition.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 88*

*Required Courses:*

Code	Title	Credit Hours
<b>Mandated First-Year Curriculum</b> <sup>1</sup>		
JUDO 0402	Civil Procedure I	2-4
JUDO 0404	Constitutional Law	4
JUDO 0406	Contracts	4
JUDO 0410	Criminal Law I	3
JUDO 0414	Legal Research & Writing (LRW I) <sup>2</sup>	2-3
JUDO 0414	Legal Research & Writing (LRW II) <sup>2</sup>	2-3
JUDO 0418	Property	4
JUDO 0420	Torts	4
JUDO 0437	Introduction to Transactional Skills	1-2
Elective Menu Course <sup>3</sup>		1-6
<b>First-Year Credit Hours</b>		<b>32</b>

1

All students must successfully complete all courses in their program's required first-year curriculum. Unless otherwise provided, successful completion means attaining a grade of "D" or better in a letter-graded course and "S-" or better in a non-letter-graded course. Students who fail to successfully complete a course in the mandated first-year curriculum must retake the course at the next possible opportunity, as determined by the Assistant Dean for Students. Note that required first-year courses are subject to change based on a full faculty vote.

2

All students must take Legal Research & Writing II (LRW II) in the Spring term immediately following the Fall term in which Legal Research & Writing I (LRW I) was taken. However, any student who receives a grade of "F" or "FA" in LRW I may not take LRW II in sequence but, instead, must take both courses the following year. Further, any student who receives a grade of "F" or "FA" in LRW II must, in the following year, retake both LRW I and LRW II if that student received a grade below "C" in LRW I or only retake LRW II if that student received a grade of "C" or better in LRW I.

3

Students choose from the available courses in the Elective Menu during the Fall term.

Code	Title	Credit Hours
------	-------	--------------

### Requirements After the First Year<sup>1</sup>

Professional Responsibility course <sup>2</sup>		
Two upper-level writing courses <sup>3</sup>		
Serial Paper		
Research Paper		
Upper-level Experiential/Professional Skills courses <sup>4</sup>		
Bias in the Law course <sup>5</sup>		
Upper-level electives		
<b>Post-First Year Credit Hours</b>		<b>56</b>

1

To learn more about Beasley School of Law's upper-level course offerings, review the Course Selection site (<https://law.temple.edu/academics/course-selection/>).

2

Requiring this course reflects Temple's commitment to the development of lawyers with high ethical standards. Students must meet this requirement by attaining a grade of "C" or better in a Professional Responsibility course. In the event that the student receives less than a "C" the first time taking the course, the student must:

- take a Professional Responsibility course again;
- attain a grade of "C" or better in that course;
- earn sufficient credits above the 88 credits normally required for graduation in order to make up for the credits that were received for the first Professional Responsibility course that was not successfully completed; and
- consult the Office of Student Services for more information.

3

Students fulfill the upper-level writing requirement by attaining a grade of "C" or better in a 2- or 3-credit Writing Seminar or Guided Research project that meets the standards for the Serial Paper component and, for the Research Paper component, by completing:

- a Note or Comment for one of the two law school journals, or
- a brief in a moot court or Jessup competition, which the supervising full-time faculty member certifies meets Research Paper standards and would have received a grade of "C" or better if it had been letter graded.

4

All students who matriculated prior to Fall 2016 must successfully complete a course designated as a Professional Skills course. All students who matriculated in or after Fall 2016 must successfully complete one or more Experiential courses totaling at least 6 credits. Students may take Experiential/Professional Skills courses at any time, provided they have completed the mandated First-Year Curriculum and any other applicable prerequisite courses. For this purpose, successful completion means a grade of "C" or better in a letter-graded course and "S" or better in a non-letter-graded course. Courses that satisfy the Experiential/Professional Skills requirement include those designated as Clinical courses (both Internal Clinics and External Clinics), Externships, Practicums and designated Simulation courses. Writing courses taken to fulfill the Experiential/Professional Skills requirement cannot also fulfill the upper-level writing requirement.

5

All students who matriculated into the JD program on or after July 1, 2021 must successfully complete at least one course from a menu of courses that explore bias in the law. For this purpose, successful completion means a grade of "C" or better in a letter-graded course and "S" or better in a non-letter-graded course. The decision on what courses satisfy this graduation requirement is made by the Associate Dean for Academic Affairs.

**Cumulative GPA Required to be Awarded the Degree:** 2.0 minimum

## Contacts

### Program Web Address:

<https://www.law.temple.edu/academics/degrees/jd/>

### Submission Address for Application Materials:

Office of Admissions  
Temple University Beasley School of Law  
1719 N. Broad Street  
Philadelphia, PA 19122-6002  
lawadmis@temple.edu  
800-560-1428  
215-204-5949  
Fax: 215-204-9319

## Law SJD

BEASLEY SCHOOL OF LAW

### About the Program

The Doctor of Juridical Science (SJD) degree program is designed for law school graduates who demonstrated excellent law school academic performance and writing skills, which indicate potential to conduct legal research and scholarship in the English language. This highly selective program accepts no more than two SJD candidates in a given academic year. Admitted SJD students are expected to complete their dissertation research within three years.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program is completed on a full-time basis. In Year 1, SJD students study in residence in Philadelphia. In Years 2 and 3, students may register for 2 credits of dissertation research without being physically present on Main campus.

**Job Prospects:** SJD graduates usually teach law at the university level outside of the United States.

**Non-Matriculated Student Policy:** Students must be matriculated in the program to take courses.

**Financing Opportunities:** All incoming SJD candidates are charged a one-time SJD program fee of \$12,000. The SJD program does not have a scholarship program, but students may explore financial aid opportunities commonly available to JD students. Tuition and cost information is available at <https://law.temple.edu/about/tuition/>. For

financial aid information, visit <https://law.temple.edu/resources/financial-aid/graduate-international/>.

Temple LLM graduates enrolled in the SJD program pay a per-credit tuition charge, set by the Temple University Board of Trustees, each semester of enrollment.

Non-Temple LLM graduates enrolled in the SJD program who are required to enroll for a *second* semester of classes are required to pay the full-time tuition rate for those second-semester courses. When approved to begin work on their dissertation, these students will thereafter register for two credits of dissertation research every semester of SJD program enrollment and pay a per-credit hour tuition charge, set by the Temple University Board of Trustees, each semester of enrollment.

SJD students are also charged any mandatory Temple University student non-tuition fees, including international student fees assessed to all F-1 visa holders and university service fees assessed to all enrolled Temple University students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* May 15

### Application Procedures:

Procedures for applying to the SJD degree program vary depending on where the applicants earned their LLM degree:

#### *Apply as a Temple LLM Graduate*

- Take courses for grades while enrolled in Temple's LLM program.
- Earn a final cumulative Temple Law School GPA of 3.33 or higher.
- Earn a grade of "B+" (3.33) or higher in JUDO 0414 Legal Research & Writing or JUDO J414 Legal Research & Writing.
- Earn a grade of "B" (3.00) or higher in an upper division research writing seminar.
- Demonstrate, if relevant, a TOEFL IBT score of 100 or IELTS score of at least 7.0 with no individual scores below 6.5 points.
- Complete and submit an online Temple Law SJD application.
- Provide two letters of recommendation from two Temple law professors that endorse the applicant's English writing ability, recommend the applicant's admission into the program, and endorse the subject matter of the proposed dissertation.
- Submit a detailed dissertation topic proposal.
- Provide a current resume or CV.
- Submit a personal statement describing your goals and motivation to earn the SJD degree.

SJD applicants should not solicit Temple law professors regarding SJD dissertation supervision in advance. A Temple Law faculty SJD Committee reviews each SJD applicant's file. The SJD Committee decides if an applicant's SJD file is suitable for presentation to a tenured Temple law professor that the Committee has identified as a potential SJD research advisor and dissertation committee chairperson. The SJD Committee, not an individual law professor, makes all final decisions regarding SJD admission and dissertation advisor assignments.

*OR Apply as a Non-Temple LLM Graduate*

1. Complete and submit an online Temple Law SJD application.
2. Submit official transcripts from all law schools and universities previously attended.
3. Demonstrate, with submission of an official score report, a TOEFL IBT score of at least 100 or IELTS overall score of at least 7.0 with no individual scores below 6.5 points, if relevant.
4. Provide two letters of recommendation from professors or workplace superiors who are able to certify the applicant's legal research and writing skills.
5. Submit a detailed dissertation topic proposal.
6. Provide a current resume or CV.
7. Submit a personal statement describing your goals and motivation to earn the SJD degree.

SJD applicants should not solicit Temple law professors regarding SJD dissertation supervision in advance. The applicant must meet the requirements for admission into our program. In addition, a Temple Law faculty SJD Committee reviews each SJD applicant's file and decides if an applicant's proposal will be passed on to a tenured law professor who might be willing to serve as an advisor and dissertation committee chairperson. If a professor is identified and amenable, the candidate may be admitted into the SJD program. The SJD Committee makes all final decisions regarding SJD admission and dissertation advisor assignments. Individual professors cannot independently make SJD admission offers.

## Program Requirements

### General Program Requirements:

*Coursework Required of Temple LLM Graduates:* Register for 2 credits of JUSI D899 Dissertation Research every semester of enrollment in the SJD program. At least one year in residence at Beasley School of Law on Main campus in Philadelphia is required to allow the student to meet regularly with the dissertation advisor.

*Coursework Required of Non-Temple LLM Graduates:* Enroll in graded Temple Law classes in the Fall semester. SJD First-Year classes are individually selected from the JD curriculum to ensure they relate to the student's research topic. At least one law writing class is required. Students must earn a cumulative GPA of 3.33 or higher. For the writing class, a grade of "B" or higher is required of domestic students and a minimum grade of "B+" is required of international students. If a student fails to satisfy the grade requirement after one semester, the advisor and Office of Graduate and International Programs determine whether to allow the student to enroll in Spring semester classes to achieve compliance.

When students have satisfactorily completed their coursework and are approved to begin work on their dissertation, they thereafter register every semester for 2 credits of JUSI D899 Dissertation Research while enrolled in the SJD program. When the dissertation phase begins, students must spend at least the next year in residence at Beasley School of Law on Main campus in Philadelphia to allow regular meetings with their dissertation advisor.

**Additional Requirement:** At the end of each academic year of enrollment, the dissertation advisor must certify to the SJD Committee that the student has made satisfactory progress. If satisfactory progress has not been made at the end of any academic year, the student receives a written warning that satisfactory progress must be attained by the end of the following semester to continue in the program.

### Culminating Events:

### *Dissertation Committee:*

After making satisfactory progress during the first year of dissertation work, the advisor forms a dissertation committee consisting of a minimum of two other faculty members, including at least one of whom is tenured or tenure track. Non-tenure track faculty may serve on a committee only if they have a five-year contract. The advisor also has the discretion to form the committee before the end of the first dissertation year.

### *Annual Public Presentation of SJD Dissertation Work-in-Progress:*

SJD students who have begun work on their dissertation must give a public presentation of their research each academic year. This could be a student organization event or a student panel organized by the Office of Graduate and International Programs.

### *Attendance at Faculty Colloquia:*

SJD students are invited to attend faculty colloquia. This aids students in understanding what is expected of legal academic researchers and demonstrates how to present legal research in an academic setting.

### *Law Professor Mentor and Classroom Observation:*

Law professors may offer to mentor SJD students by allowing them to observe one of their classes and provide information about pedagogical issues related to teaching law students.

### *Oral Dissertation Defense:*

When an advisor, in consultation with the student's dissertation committee, has determined that the candidate is ready to defend the dissertation, the advisor coordinates scheduling of the oral dissertation defense with the Office of Graduate and International Programs. Candidates who pass the defense work with the Office of Graduate and International Programs ensure that their dissertation is properly submitted to the University. If the candidate conditionally passes the defense, the advisor gives the candidate a deadline, which may not exceed one semester, to satisfy any deficiencies in the dissertation. If the candidate fails the defense, the candidate is dismissed from the program.

### *Dissertation Honors:*

At the discretion of the advisor, the candidate may be awarded an "honors" designation on the transcript for an outstanding dissertation.

## Contacts

### Program Web Address:

<https://law.temple.edu/academics/degrees/sjd/>

### Department Information:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002  
intl@law.temple.edu  
215-204-1448

### Submission Address for Application Materials:

intl@law.temple.edu

### Department Contacts:

*Director of International Law Programs:*  
Karen McMichael  
karen.mcmichael@temple.edu

215-204-1448

## Legal Education LLM

BEASLEY SCHOOL OF LAW

### About the Program

This program is not open for enrollment for the 2023-2024 academic year.

## Taxation LLM

BEASLEY SCHOOL OF LAW

### About the Program

The Master of Laws in Taxation program trains lawyers who aim to specialize in tax practice. It offers a diverse curriculum that allows students to shape their education based on their aspirations, whether they involve business planning and compliance, employee benefits, estate planning, international tax or tax controversy. Professors are top-flight academics and practitioners who give the law context. Focus is on skills training, both inside the classroom and out, through real-world simulations, practicums and volunteer opportunities.

Beyond offering a first-rate education, the LLM in Taxation program is exceptionally affordable and convenient. Tuition is among the lowest in the country. Students take classes on their own schedule at Temple's Main campus, Center City campus or remotely.

**Time Limit for Degree Completion:** 4 years following initial enrollment

**Campus Location:** Main or Center City, with some courses offered online

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Temple Juris Doctor (JD) students have the opportunity to earn an LLM in Taxation in as little as one additional semester of study and pay no additional tuition for LLM courses taken while earning their JD degree. All students can receive continuing legal education credits for the course credits they earn.

**Job Prospects:** Graduates are employed or gain employment at accounting firms; banks; federal, state and local governments; in-house tax departments of businesses; law firms; trust companies; and wealth management companies. They also start their own firms.

**Non-Matriculated Student Policy:** Non-matriculated enrollment by the general public is not permitted. Alumni of the Graduate Tax Program are permitted to re-enroll with the Beasley School of Law as non-matriculated students to audit taxation-specific courses at the current Graduate Tax Program tuition rate.

**Financing Opportunities:** Tuition and cost information is available at <https://law.temple.edu/about/tuition/>. For financial aid information, visit <https://law.temple.edu/resources/financial-aid/graduate-international/>. See also the Barbara W. Freedman Memorial Scholarship, which is awarded to current LLM and JD students based on academic performance in tax.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* August 1

*Spring:* December 15

*Summer:* May 1

Applicants are admitted on a rolling basis and are encouraged to apply as early as possible while space is available in the program. The cost to apply is \$50.

*APPLY ONLINE to this program.*

### Letters of Reference:

*Number Required:* 0

**Degree Required for Admission Consideration:** A Juris Doctor or equivalent first degree in law for non-U.S. law school graduates is required. Official law transcripts must be submitted either electronically or as hard copy received in a sealed envelope from the issuing institution.

**Statement of Goals:** Outline your interest in the program in a one- to two-page personal statement.

### Standardized Test Scores:

Unless a waiver is provided, lawyers trained in a non-English-speaking country must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- Duolingo: 115

**Resume:** Current resume or CV is required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 24

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
JUDO 0511	Corporate Taxation	2-3
MLTX G521	Taxation/Partnerships	2-3
MLTX G641	Taxation II	2
<b>Electives</b> <sup>2</sup>		<b>16-18</b>
<b>Total Credit Hours</b>		<b>24</b>

1

Students who did not previously complete a basic course in Taxation must also take MLTX 0501 Taxation 1, although this course is not counted toward the LLM degree.

2

Coursework is related to tax law, as approved by the program director. One elective must be a writing course that satisfies the writing requirement.

**Cumulative GPA Required to be Awarded the Degree:** 2.5 minimum

## Contacts

### Program Web Address:

<https://law.temple.edu/academics/degrees/lm-tax/>

### Department Information:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002  
intl@law.temple.edu  
215-204-1448  
Fax: 215-204-2282

### Mailing Address for Application Materials:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002

## Taxation MS

BEASLEY SCHOOL OF LAW

### About the Program

The Beasley School of Law offers an MS program for accountants through which students acquire in-depth knowledge of taxation law. This program is ideally suited for accountants wishing to gain a mastery of taxation law, without becoming lawyers. Students in the program take both law and business classes and seminars with our Master of Laws in Taxation students. Courses are taught primarily by law faculty, with the exception of advanced accounting classes taught by faculty from the Fox School of Business and Management. Students develop both practical and theoretical expertise through case analyses and rigorous class participation with lawyers and Juris Doctor students. The Beasley School of Law has a solid history of preparing students to hit the ground running in a variety of law and law-related fields.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online, with some in-person instruction on Main or the Center City campuses

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Business classes in Valuation and Accounting may be required.

**Affiliation(s):** The Beasley School is a member of the American Association of Law Schools.

**Ranking:** The Beasley School of Law is highly ranked. In the 2023-2024 rankings by *U.S. News & World Report*, Beasley is tied for 54th out of 196 law schools.

**Accreditation:** The Beasley School of Law is fully accredited by the American Bar Association.

**Areas of Specialization:** Areas of specialization include:

- Business
- Estate Planning
- Employee Benefits
- Litigation

**Job Prospects:** Graduates are prepared for employment in accounting firms or to advance in their careers at their current firm.

**Non-Matriculated Student Policy:** Students must be matriculated in the program to take courses.

**Financing Opportunities:** Matriculated students are eligible for federal financial aid.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* August 1  
*Spring:* December 15  
*Summer:* May 1

Applications are processed as they are received throughout the year. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 1

*From Whom:* Letters of recommendation should be obtained from an immediate supervisor, current or past, and/or from academic evaluators.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Accounting or in a related field is required.

**Statement of Goals:** Describe your future goals in specific terms and how the MS will assist you in achieving those goals.

### Standardized Test Scores:

For applicants whose native language is not English, a minimum score on the TOEFL or IELTS is required:

- TOEFL iBT: 88
- IELTS Academic: 6.5

**Resume:** Current resume required.

**Transfer Credit:** Advanced standing is not granted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
<b>Core Courses</b>		
MLTX 0521	Partnership Taxation	3
MLTX 0522	Corporate Taxation I	3
MLTX G518	Introduction to Tax and Legal Reasoning	2
MLTX G641	Taxation II	3
	Accounting for Income Taxes	3

**Electives**

Select courses from the following to total at least 16 credits: <sup>2</sup> 16

JUDO 0670	Tax Practicum
JUDO 1021	Tax Policy and Administration Colloquium
JUDO 1036	Low Income Taxpayer Policy and Practice
MLTX 0511	Estate and Gift Taxation
MLTX 0515	Estate Planning II
MLTX 0520	Real Estate Taxation
MLTX 0998	Guided Research
MLTX G500	Non Tax Issues/Est Plang
MLTX G501	Introduction to Employee Benefits
MLTX G504	IRS Collections
MLTX G505	State and Local Taxation
MLTX G509	Taxation of Executive Compensation
MLTX G512	Income Taxation of Estates and Trusts
MLTX G513	Estate Planning I
MLTX G514	Taxation of Exempt Organizations
MLTX G516	Business and Estate Planning Involving Closely Held Businesses
MLTX G525	Qualified Employee Benefit Plans
MLTX G526	Welfare Benefit Plans
MLTX G528	Civil and Criminal Tax Penalties
MLTX G529	Tax Practice from the In-House Perspective
MLTX G531	Tax Procedure
MLTX G548	Tax Treaties
MLTX G571	International Taxation
MLTX G802	ERISA/Fiduciary Provisions
MLTX G803	Estate Planning I
MLTX G804	Tax Provsn Corp Acquistn
MLTX G805	Drafting and Analyzing Fundamental Estate Planning Documents
MLTX G807	Professional Conduct in Tax Practice
MLTX G860	Employee Benefits Tax Policy
Data Analytics I: Data Extraction and Transformation	
Data Analytics II: Data Visualization	
Project Management	
State and Local Tax Controversy	
Tax Research and Writing	
Taxation of Mergers and Acquisitions	

**Total Credit Hours** 30

1

For course information in the Beasley School of Law, see <http://www.law.temple.edu/resources/student-services/course-registration/schedules-and-descriptions/>.

2

Additional electives related to tax law may be approved by the Academic Director.

**Culminating Event:** Completion of coursework is required to earn the MS in Taxation.

**Contacts****Program Web Address:**

<https://www.law.temple.edu/academics/degrees/mst/>

**Department Information:**

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002  
kathy.mandelbaum@temple.edu  
215-204-1448  
Fax: 215-204-2282

**Mailing Address for Application Materials:**

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002

**Department Contacts:**

*Office Manager:*  
Farlistcity El-Baker  
farlistcity.el-baker@temple.edu  
215-204-1073

*Academic Director:*  
Kathy Mandelbaum, Esq.  
Director, MS in Taxation and LLM in Taxation  
kathy.mandelbaum@temple.edu  
215-204-5382

**Transnational Law LLM**

BEASLEY SCHOOL OF LAW

**About the Program**

The Transnational Law LLM degree is grounded in international and comparative law coursework and requires a period of study abroad. Applicants must have completed a first degree in law in English in a common law country. International applicants with a civil law education background should apply to the general LLM for foreign-trained lawyers.

Transnational Law LLM students gain the skills and knowledge to compete successfully in a world wherein the practice of law is no longer limited by national borders. Our graduates are knowledgeable about international legal doctrines, adept at dealing with multiple legal systems, and familiar with other cultures.

**Time Limit for Degree Completion:** 4 years following initial enrollment

**Campus Location:** Main and a required study abroad location, as identified below

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Coursework completed in earning the Transnational Law LLM degree may be applied toward the Juris Doctor (JD) for those currently enrolled as JD students. These students may qualify for the JD/LLM degree. While this is not a concurrent degree,



current JD students may earn up to half of the credits toward the LLM degree. A JD/LLM student who earns 88 credits, the minimum number of credits required for a JD degree, may apply up to six credits from eligible international law courses, exclusive of International Law, toward an LLM. For each additional credit a student earns beyond the minimum number of credits for a JD degree, the student can apply one more credit from eligible international courses toward an LLM, up to a maximum of 12 credits.

**Study Abroad:** While pursuing the Transnational Law LLM degree, students are required to study abroad during the Spring semester in Tokyo at Temple University Japan or over the Summer semester at the Temple University Rome campus. Alternately, students may spend a semester abroad at a foreign law school outside of Temple University through one of our Semester Exchange Partner Schools.

**Areas of Specialization:** Coursework for this degree is limited to international and comparative law. Credits in U.S. domestic law are not eligible to count toward the degree. The curriculum is not designed to satisfy U.S. bar exam requirements.

**Job Prospects:** Graduates may have an advantage in procuring employment that requires international law study and experience.

**Non-Matriculated Student Policy:** Students must be matriculated in the program to take courses.

**Financing Opportunities:** The Transnational Law LLM degree program does not have a scholarship program. Tuition and cost information is available at <https://law.temple.edu/about/tuition/>. For financial aid information, visit <https://law.temple.edu/resources/financial-aid/graduate-international/>.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* June 1

*Spring:* November 1

Applicants are admitted on a rolling basis and are encouraged to apply as early as possible while space is available in the program. Payment of the \$50 application fee may be remitted directly to Temple Law by check or money order payable to "Temple University."

*APPLY ONLINE to this program.*

### Letters of Reference:

*Number Required:* 1

*From Whom:* The reference letter may be written by a professor or employment supervisor and should candidly evaluate the applicant's academic abilities and/or professional skills. Relevant work experience may also be considered evidence of potential for graduate study.

**Degree Required for Admission Consideration:** A Juris Doctor or equivalent first degree in law from an English common law country is required. Official law transcripts must be submitted either electronically or as hard copy received in a sealed envelope from the issuing institution, with English translation if needed.

**Statement of Goals:** Outline your interest in the program in a one- to two-page personal statement. Applicants should explain their interest in graduate study in international and comparative law, as well as any other factors the admissions committee should take into consideration when

evaluating their application. The statement should demonstrate your organizational, analytical and writing skills. Thus, applicants should invest appropriate time and effort in preparing this statement. The personal statement is carefully evaluated by the admissions committee.

**Resume:** Current resume or CV is required.

## Program Requirements

### General Program Requirements

*Number of Credits Required to Earn the Degree:* 24

No specific courses are required, but all coursework taken to complete the Transnational Law LLM degree must be related to international law, as approved by the faculty director.

One course must be a writing course that satisfies the writing requirement.

LLM students who did not previously complete a basic course in International Law are required to take such a course, although this course cannot be counted toward the Transnational Law LLM degree.

**Cumulative GPA Required to be Awarded the Degree:** 2.5 minimum

## Contacts

### Program Web Address:

<https://law.temple.edu/academics/degrees/llm-transnational-law/>

### Department Information:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002  
215-204-1448  
Fax: 215-204-2282

### Mailing Address for Application Materials:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002

## Trial Advocacy LLM

BEASLEY SCHOOL OF LAW

### About the Program

The LLM in Trial Advocacy curriculum integrates the development of theory and theme, persuasive storytelling, extemporaneous speech, and effective use of technology in the courtroom. The program is performance-based, featuring a "learn by doing" approach.

Designed for the practicing attorney, the program's 24 credits are completed in one year. Classes are scheduled one evening a week for three hours (6:00-9:00 p.m.) for the duration of the program. Weekly classes may be attended online if the student works and/or lives more than a one-hour drive from Temple's Main campus. However, all students must attend the August Bootcamp and scheduled performance weekends on our Philadelphia campus.

Students graduate with the LLM degree in Trial Advocacy, and those who have already been admitted to a state bar earn 22 substantive CLE credits and two ethics credits.

Temple's LLM in Trial Advocacy is an ideal fit for those who aspire to perfect their litigation tactics, remote advocacy and courtroom performance. In addition, this program provides training and an introduction for students who wish to pursue teaching in academia.

**Time Limit for Degree Completion:** 1 year

**Campus Location:** Main campus or, if the student works/lives more than one hour's drive away, online

**Full-Time/Part-Time Status:** The degree program is completed on a full-time basis.

**Non-Matriculated Student Policy:** Students must be matriculated in the program to take courses.

**Financing Opportunities:** All applicants for financial aid must submit a FAFSA form and complete the online Graduate Law Student Financial Aid Request Form. Students can apply online for federal Direct Subsidized and Unsubsidized Loans and/or the federal Direct PLUS Loan at <https://studentaid.gov/>. For more information, visit our Financial Aid webpage.

A number of partial scholarships to the LLM in Trial Advocacy Program are awarded each year to attorneys practicing in public interest settings. Awards are applied in equal amounts in the Fall and Spring terms.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer:* May 31

Admission is selective, and class size is limited. Applicants are admitted on a rolling basis. Late applications may be accepted if space is available. The cost to apply is \$50.

*APPLY ONLINE to this program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* The reference letters must be written by law professors or legal employers who are well acquainted with your academic abilities and/or professional skills.

**Degree Required for Admission Consideration:** Applicants must hold a Juris Doctor or other law degree from a law school accredited by the American Bar Association or must hold a first law degree from a foreign law school approved by the appropriate authority in that country.

Applicants who received their first law degree from a U.S. law school that is not, or at the time of the applicant's graduation was not, accredited by the American Bar Association may be considered for admission if the applicant:

- is licensed to practice law in at least one state within the United States;
- can provide a certificate of good standing from that state's bar; and
- has a strong interest in or experience in advocacy or related areas of practice.

Official transcripts and certificates of law degree completion must be submitted to Temple Law either electronically or as hard copy received in a sealed envelope from the issuing institution, accompanied by the certified English translation if needed. Transcripts that have been opened and handled by the applicant are not considered acceptable.

### Standardized Test Scores:

Unless a waiver is provided, applicants trained in a non-English-speaking country must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- Duolingo: 115

**Interview:** A personal interview with the Program Director is an integral part of the admissions process. Admissions decisions are based on application materials, advocacy and trial experience, career objectives and the interview. Applicants who live a considerable distance from campus may request a telephone interview.

## Program Requirements

### General Program Requirements

*Number of Credits Required to Earn the Degree:* 24

*Required Courses:*

Year 1		Credit Hours
Summer II		
MLTA 0500	Orientation	1
MLTA 0501	The Art of Advocacy	2
MLTA 0503	Evidence/Trial Lawyers	3
MLTA 0504	Speechmaking	3
<b>Credit Hours</b>		<b>9</b>
Fall		
MLTA 0502	Expert Witnesses	2
MLTA 0507	Pretrial Stratgy & Discvry	5
MLTA 0508	The Jury Trial	2
<b>Credit Hours</b>		<b>9</b>
Spring		
MLTA 0505	Litigation Strategy	2
MLTA 0506	Lecture Series	2
MLTA 0508	The Jury Trial	2
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>24</b>

## Contacts

### Program Web Address:

<https://law.temple.edu/academics/degrees/llm-trial/>

### Department Information:

Trial Advocacy Programs  
Temple University Beasley School of Law  
1719 N. Broad Street  
Philadelphia, PA 19122-6002

llmtrial@temple.edu  
215-204-2738

## Department Contacts:

### Office Manager:

Joel Houkom  
Senior Legal Assistant  
jhoukom@temple.edu  
215-204-8990

### Director, LLM in Trial Advocacy Program:

Marian G. Braccia  
Practice Professor of Law  
marian.braccia@temple.edu  
215-204-2738

### Director of Advocacy Programs:

Jules Epstein  
Edward D. Ohlbaum Professor of Law  
jules.epstein@temple.edu  
215-204-2738

# Graduate Certificate: American Legal Studies

BEASLEY SCHOOL OF LAW at Temple University Japan

## About the Certificate

The American Legal Studies certificate is chiefly designed for three types of professionals:

- legal practitioners who want to study law in English but are unable to travel overseas for an extended period of time, as required by our LLM programs;
- qualified individuals who do not have a law degree but do hold a degree in finance or other related field; and
- persons who have legal-related professional experience, such as engineers working in intellectual property matters, who are not eligible to matriculate into an LLM program.

Credits earned in completing the certificate may be applied toward the LLM in American Law for those eligible to later pursue the degree.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Temple University Japan

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis.

## Admission Requirements and Deadlines

### Application Deadline:

For applicants who *do not need* a student visa:

Fall: August 1  
Spring: December 1  
Summer: May 1

For applicants who *need* a student visa:

Fall: April 15

Spring: September 10  
Summer: January 15

### Student Visa Application Deadline:

Fall: May 15  
Spring: October 10  
Summer: February 15

The cost to apply is ¥12,200. An email with payment instructions is sent to applicants after submission of the online application form. Payment may be remitted by credit card online. Wire transfer is also available, but requires an additional ¥3,000 to cover Japanese bank fees.

APPLY ONLINE to this certificate program.

**Coursework Required for Admission Consideration:** Applicants who do not hold a law degree from a common-law country are required to attend an introductory seminar on Common Law Reasoning before taking courses at Temple University Japan (TUJ).

**Degree Required for Admission Consideration:** Official transcripts from all institutions attended must be submitted directly to TUJ. Transcripts must be sent either electronically through an academic credential evaluation service, such as World Evaluation Service (WES) or Law School Admission Council (LSAC), or as hard copy received in a sealed envelope from the issuing institution.

**Statement of Goals:** In 500 to 1,000 words, share your personal history, professional interests and abilities.

### Standardized Test Scores:

All non-native speakers of English must submit an official TOEFL or IELTS score. Applicants who earned a university degree in an English-speaking country or from an institution in which English is the language of instruction may petition to have the language proficiency test requirement waived.

- TOEFL iBT: send officially to TUJ using TOEFL code 9698
- IELTS Academic: send officially directly to TUJ

**Resume:** Current resume or CV is required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
	Courses in U.S. Law	9
	Course(s) in International/Comparative Law or U.S. Law	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 2.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.tuj.ac.jp/law/programs/certificate-audit>

## Certificate Admissions Web Address:

<https://www.tuj.ac.jp/law/admissions/certificates>

## Campus Information:

Beasley School of Law  
Temple University Japan  
1-14-29 Taishido, Setagaya-ku  
Tokyo, Japan 154-0004  
tujlaw@tuj.temple.edu  
+81-3-5441-9841

## Submission Address for Application:

<https://www.tuj.ac.jp/law/admissions/form-application>

## Mailing Address for Application Materials:

Beasley School of Law  
Temple University Japan  
1-14-29 Taishido, Setagaya-ku  
Tokyo, Japan 154-0004

## Request Information on TUJ Programs:

<https://www.tuj.ac.jp/law/form-request-info>

## Contact/Chat with Beasley School of Law TUJ:

<https://www.tuj.ac.jp/law/contact>

## Department Contacts:

*Admissions:*  
Beasley School of Law at TUJ  
tujlaw@tuj.temple.edu  
+81-3-5441-9841

## Graduate Certificate: Employee Benefits Law

BEASLEY SCHOOL OF LAW

### About the Certificate

The Employee Benefits Law certificate is designed for those interested in additional training who are not yet ready to pursue an LLM degree. The certificate program exposes students to the sophisticated federal laws that govern the provision of employee benefits. Credits earned in completing the certificate may be applied toward the LLM in Taxation if pursued later.

**Time Limit for Certificate Completion:** 2 years, although the program is often completed in two semesters

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* August 1

*Spring:* December 15

*Summer:* May 1

The cost to apply is \$50.

*APPLY ONLINE to this certificate program.*

**Coursework Required for Admission Consideration:** Applicants must have satisfactorily completed a basic tax income course in law school or demonstrated comparable work experience. An applicant who cannot meet this requirement must take JUDO 0600, the basic tax course in taxation offered for Temple's JD program, in the first term of enrollment. Credits earned in meeting this prerequisite are not applied toward the certificate program.

**Degree Required for Admission Consideration:** A Juris Doctor or equivalent first degree in law for non-U.S. law school graduates is required. Official law transcripts must be submitted either electronically or as hard copy received in a sealed envelope from the issuing institution.

**Statement of Goals:** Outline your interest in the program in a one- to two-page personal statement.

#### Standardized Test Scores:

Unless a waiver is provided, lawyers trained in a non-English-speaking country must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- Duolingo: 115

**Resume:** Current resume or CV is required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 8

*Required Courses:*

Code	Title	Credit Hours
<b>Core Course</b>		
MLTX G501	Introduction to Employee Benefits	2
<b>Electives</b>		
Select three from the following:		6
MLTX G509	Taxation of Executive Compensation	
MLTX G525	Qualified Employee Benefit Plans	
MLTX G526	Welfare Benefit Plans	
MLTX G802	ERISA/Fiduciary Provisions	
MLTX G860	Employee Benefits Tax Policy	
<b>Total Credit Hours</b>		<b>8</b>

**GPA Required to be Awarded the Certificate:** 2.5 minimum

## Contacts

### Certificate Program Web Address:

<https://www.law.temple.edu/academics/degrees/certificates/employee-benefits/>

## Department Information:

Office of Graduate and International Programs  
 Temple University Beasley School of Law  
 1719 N. Broad Street, 710 Klein Hall  
 Philadelphia, PA 19122-6002  
 intl@temple.edu  
 215-204-1448  
 Fax: 215-204-2282

## Mailing Address for Application Materials:

Office of Graduate and International Programs  
 Temple University Beasley School of Law  
 1719 N. Broad Street, 710 Klein Hall  
 Philadelphia, PA 19122-6002

## Department Contacts:

*Senior Legal Assistant, Graduate and International Programs:*

Joel Houkom  
 711 Klein Hall  
 jhoukom@temple.edu  
 215-204-8990

*Director of International Programs:*

Karen McMichael  
 709 Klein Hall  
 karen.mcmichael@temple.edu  
 215-204-6894

*Assistant Dean, Graduate & International Programs:*

John Smagula  
 713 Klein Hall  
 john.smagula@temple.edu  
 215-204-1285

# Graduate Certificate: Estate Planning

BEASLEY SCHOOL OF LAW

## About the Certificate

The Estate Planning certificate is designed for those interested in additional training who are not yet ready to pursue an LLM degree. The certificate program exposes students to sophisticated federal estate, gift and generation-skipping transfer tax issues, as well as the federal income taxation of trusts and estates. The program benefits practitioners who want to concentrate on tax issues involved in estate planning and estate administration. It also provides valuable training for relatively inexperienced practitioners who want to acquire an advanced level of expertise in the field. Credits earned in completing the certificate may be applied toward the LLM in Taxation if pursued later.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* August 1  
*Spring:* December 15  
*Summer:* May 1

The cost to apply is \$50.

*APPLY ONLINE to this certificate program.*

**Coursework Required for Admission Consideration:** Applicants must have satisfactorily completed a basic tax income course in law school or demonstrated comparable work experience. An applicant who cannot meet this requirement must take JUDO 0600, the basic tax course in taxation offered for Temple's JD program, in the first term of enrollment. Credits earned in meeting this prerequisite are not applied toward the certificate program.

**Degree Required for Admission Consideration:** A Juris Doctor or equivalent first degree in law for non-U.S. law school graduates is required. Official law transcripts must be submitted either electronically or as hard copy received in a sealed envelope from the issuing institution.

**Statement of Goals:** Outline your interest in the program in a one- to two-page personal statement.

### Standardized Test Scores:

Unless a waiver is provided, lawyers trained in a non-English-speaking country must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- Duolingo: 115

**Resume:** Current resume or CV is required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Course</b>		
Select one from the following:		2-3
MLTX G513	Estate Planning I	
MLTX G803	Estate Planning I	
<b>Electives</b>		
Select three from the following:		7-6
MLTX 0511	Estate and Gift Taxation	
MLTX 0515	Estate Planning II	
MLTX G500	Non Tax Issues/Est Plang	
MLTX G512	Income Taxation of Estates and Trusts	
MLTX G513	Estate Planning I	
MLTX G805	Drafting and Analyzing Fundamental Estate Planning Documents	

MLTX G806 Orphans Court Pleading and Trial Practice

**Total Credit Hours**

9

**GPA Required to be Awarded the Certificate:** 2.5 minimum**Contacts****Certificate Program Web Address:**<https://www.law.temple.edu/academics/degrees/certificates/estate-planning/>**Department Information:**

Office of Graduate and International Programs  
 Temple University Beasley School of Law  
 1719 N. Broad Street, 710 Klein Hall  
 Philadelphia, PA 19122-6002  
 intl@law.temple.edu  
 215-204-1448  
 215-204-1073  
 Fax: 215-204-2282

**Mailing Address for Application Materials:**

Office of Graduate and International Programs  
 Temple University Beasley School of Law  
 1719 N. Broad Street, 710 Klein Hall  
 Philadelphia, PA 19122-6002

**Department Contacts:**

*Director of the Graduate Tax Program:*  
 Andrew Weiner  
 726 Klein Hall  
 weiner@temple.edu  
 215-204-8807

**Graduate Certificate: International Business and Compliance**

BEASLEY SCHOOL OF LAW

**About the Certificate**

In recent decades, U.S. and foreign enforcement authorities and multilateral development agencies have increased their focus on investigating and prosecuting fraud and corruption in a variety of industries. Corporations are required to develop comprehensive compliance and ethics programs to adhere to a range of domestic and foreign laws, minimize risk, and avoid legal repercussions and reputational damage, all while maximizing operational performance. Professionals with compliance training, experience and skills are in high demand.

The graduate certificate in International Business and Compliance is designed for international law students and foreign-trained lawyers who want to be credentialed as a compliance specialist. This program supports the existing LLM program by furthering its goal to provide foreign students with a comparative and deep understanding of the U.S./common law systems. Students in the certificate program who are already in the field can enhance the classroom experience with a real-world international perspective.

The certificate program is intended to provide students with an in-depth understanding of compliance-related topics with a focus on international issues. The chief learning outcomes that each student should attain include:

- an understanding of the legal, corporate governance and enforcement aspects of compliance and ethics;
- a practical understanding of the implementation and operation of an effective compliance and ethics program; and
- exposure to a variety of substantive areas of law that are relevant to compliance and ethics programs through elective courses.

**Time Limit for Certificate Completion:** One semester**Campus Location:** Main**Full-Time/Part-Time Status:** The certificate must be completed on a full-time basis.**Non-Matriculated Student Policy:** The certificate may not be taken on a non-matriculated basis.**Admission Requirements and Deadlines****Application Deadline:***Fall:* March 15*Spring:* October 15

APPLY to this certificate program.

Applicants must have earned a first degree in law, such as an LLB, outside of the United States. All application materials listed below must be submitted in English. Translations must be certified by a credentialed evaluation service. Submit both the original and the translated versions.

1. Official **law school transcript** or **proof of passage of home country lawyer license examination** provided in a sealed envelope with English translation, if needed
2. **Two** professional/academic **letters of recommendation**
3. **Personal statement** that is one to two pages in length
4. Current **resume**
5. **\$50 application fee**, which may be waived upon request
6. English proficiency is one of the most important predictors of success in our program. To ensure students have the requisite language skills to succeed at Temple Law, we require proof of **English proficiency** from every applicant who is not a native English speaker or who did not complete a degree at an institution where the language of instruction is English. Scores for a standardized test of English must meet these minimums:
  - TOEFL iBT: 88 (send officially from ETS using institution code 2906, department code 03)
  - IELTS Academic: 6.5, with no individual score below 6.0
  - Duolingo: 115

**Post-Baccalaureate Degree in Discipline/Related Discipline:**

Applicants must have graduated from a non-U.S. law school or currently be enrolled in a law school outside of the United States.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited university or college is expected.

**Interview:** Although an interview is not required, prospective applicants are welcome to visit us or schedule an informal video chat so that we may answer questions about the program.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
JUDO 5042	Introduction to Compliance and Ethics	2
JUDO 5053	International Compliance	2
MLTX G422	Introduction to the American Legal System	3
<b>Electives</b>		
Select courses from the following totaling a minimum of 5 credits:		5
JUDO 0400	Administrative Law	
JUDO 0478	Introduction to Privacy Law	
JUDO 0508	Corporations	
JUDO 0556	International Law	
JUDO 0637	International Commercial Transactions	
JUDO 0642	International Organizations	
JUDO 0876	Bus Mergers/Acquisitions	
JUDO 5029	Drug and Medical Device Law	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 2.5 minimum in all courses taken to satisfy the certificate requirements

## Contacts

### Certificate Program Web Address:

<https://law.temple.edu/academics/degrees/international-business-and-compliance/>

### Department Information:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002  
intl@law.temple.edu  
215-204-1448  
Fax: 215-204-2282

### Mailing Address for Application Materials:

Office of Graduate and International Programs  
Temple University Beasley School of Law  
1719 N. Broad Street, 710 Klein Hall  
Philadelphia, PA 19122-6002

### Department Contacts:

*Director, Center for Compliance and Ethics:*  
Michael Donnella  
michael.donnella@temple.edu  
215-204-7149

*Assistant Director for Global Legal Studies:*

Allison Lamson  
ally.lamson@temple.edu  
215-204-7538

## Graduate Certificate: International Law

BEASLEY SCHOOL OF LAW at Temple University Japan

### About the Certificate

The International Law certificate is chiefly designed for three types of professionals:

- legal practitioners who want to study law in English but are unable to travel overseas for an extended period of time, as required by our LLM programs;
- qualified individuals who do not have a law degree but do hold a degree in finance or other related field; and
- persons who have legal-related professional experience, such as engineers working in intellectual property matters, who are not eligible to matriculate into an LLM program.

Credits earned in completing the certificate may be applied toward the LLM in American Law for those eligible to later pursue the degree.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Temple University Japan

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis.

### Admission Requirements and Deadlines

**Application Deadline:**

For applicants who *do not need* a student visa:

*Fall:* August 1  
*Spring:* December 1  
*Summer:* May 1

For applicants who *need* a student visa:

*Fall:* April 15  
*Spring:* September 10  
*Summer:* January 15

**Student Visa Application Deadline:**

*Fall:* May 15  
*Spring:* October 10  
*Summer:* February 15

The cost to apply is ¥12,200. An email with payment instructions is sent to applicants after submission of the online application form. Payment may be remitted by credit card online. Wire transfer is also available, but requires an additional ¥3,000 to cover Japanese bank fees.

APPLY ONLINE to this certificate program.

**Coursework Required for Admission Consideration:** Applicants who do not hold a law degree from a common-law country are required to

attend an introductory seminar on Common Law Reasoning before taking courses at Temple University Japan (TUJ).

**Degree Required for Admission Consideration:** Official transcripts from all institutions attended must be submitted directly to TUJ.

Transcripts must be sent either electronically through an academic credential evaluation service, such as World Evaluation Service (WES) or Law School Admission Council (LSAC), or as hard copy received in a sealed envelope from the issuing institution.

**Statement of Goals:** In 500 to 1,000 words, share your personal history, professional interests and abilities.

**Standardized Test Scores:**

All non-native speakers of English must submit an official TOEFL or IELTS score. Applicants who earned a university degree in an English-speaking country or from an institution in which English is the language of instruction may petition to have the language proficiency test requirement waived.

- TOEFL iBT: send officially to TUJ using TOEFL code 9698
- IELTS Academic: send officially directly to TUJ

**Resume:** Current resume or CV is required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
	Courses in International/Comparative Law	9
	Course(s) in International/Comparative Law or U.S. Law	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 2.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.tuj.ac.jp/law/programs/certificate-audit>

### Certificate Admissions Web Address:

<https://www.tuj.ac.jp/law/admissions/certificates>

### Campus Information:

Beasley School of Law  
Temple University Japan  
1-14-29 Taishido, Setagaya-ku  
Tokyo, Japan 154-0004  
tujlaw@tuj.temple.edu  
+81-3-5441-9841

### Submission Address for Application:

<https://www.tuj.ac.jp/law/admissions/form-application>

### Mailing Address for Application Materials:

Beasley School of Law  
Temple University Japan  
1-14-29 Taishido, Setagaya-ku

Tokyo, Japan 154-0004

### Request Information on TUJ Programs:

<https://www.tuj.ac.jp/law/form-request-info>

### Contact/Chat with Beasley School of Law TUJ:

<https://www.tuj.ac.jp/law/contact>

### Department Contacts:

*Admissions:*

Beasley School of Law at TUJ

tujlaw@tuj.temple.edu

+81-3-5441-9841

## Juris Doctor Certificate: Business Law

BEASLEY SCHOOL OF LAW

### About the Certificate

The Juris Doctor certificate in Business Law is designed for students who want to develop their knowledge of business, given that they do not hold an undergraduate business degree nor have an extensive business background. While pursuing their JD degree, students in the Business Law certificate program take a minimum of 10 business-related law courses, receiving a notation on their transcript upon successful completion.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis.

**Non-Matriculated Student Policy:** The certificate may not be taken on a non-matriculated basis.

### Admission Requirements and Deadlines

**Application Deadline:**

During the *Spring semester of the first year* in Law School, apply by contacting the Beasley School of Law's Office of Academic Affairs.

**Coursework Required for Admission Consideration:** Applicants must be pursuing the Juris Doctor degree.

**Master's Degree in Discipline/Related Discipline:** Not required.

**Bachelor's Degree in Discipline/Related Discipline:** Not required.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 30*

*Required Courses:*



Code	Title	Credit Hours
<b>Mandatory Courses</b>		
JUDO 0508	Corporations	3
JUDO 0600	Taxation	3
<b>Core Courses</b>		
Select at least four from the following: <sup>1</sup>		12
JUDO 0440	Unincorporated Business Organizations: Agency, Partnerships and LLC's	
or JUDO 0441 Introduction to Business Organizations		
JUDO 0511	Corporate Taxation	
JUDO 0523	Partnership Taxation	
JUDO 0525	Corporate Finance <sup>2</sup>	
JUDO 0530	Bankruptcy	
JUDO 0570	Accounting for Lawyers <sup>2</sup>	
JUDO 0589	Secured Transactions	
JUDO 0590	Securities Regulation	
JUDO 0622	Sales	
<b>Electives</b>		
Select at least four from the following: <sup>1</sup>		12
JUDO 0438	Introduction to Business Organizations	
JUDO 0439	Business Law Basics	
JUDO 0447	Intellectual Property Licensing Law	
JUDO 0451	Business Mergers and Acquisitions	
JUDO 0453	Law of the European Union	
or JUDO 0934 Law of European Union		
JUDO 0467	International Intellectual Property	
or JUDO R4 International Intellectual Property		
JUDO 0471	Patent Prosecution	
JUDO 0472	Patent Litigation	
JUDO 0476	Business Intellectual Property	
JUDO 0482	Commercial Bankruptcy Practice and Procedures	
JUDO 0486	Law and Economics	
or JUDO 0986 Law and Economics		
JUDO 0490	Doing Business on the Internet: The Law of E-Commerce	
or JUDO 092 Law/Electronic Commerce		
or JUDO J45 Law/Electronic Commerce		
or JUDO J92 Law/Electronic Commerce		
or MLAI C49 Law Electronic Commerce		
or MLAI C92 Law Electronic Commerce		
JUDO 0494	Advising the Multinational Company on Global Legal Issues	
JUDO 0496	Legal, Professional and Business Aspects of Law Practice	
JUDO 0504	Antitrust	
JUDO 0506	Banking and Financial Reg	
or JUDO 082 Banking and Financial Reg		
JUDO 0523	Partnership Taxation	
or MLTX 052 Partnership Taxation		
JUDO 0524	Consumer Law and Litigation	
JUDO 0528	Corporate Reorganization: Chapter 11 Bankruptcy	
JUDO 0547	Introduction to Intellectual Property	
JUDO 0549	Insurance Law	
JUDO 0551	Trademarks and Unfair Competition	
or JUDO 092 Trademarks/Unfair Comptn		
JUDO 0552	Patent Law	
or JUDO 094 Patent Law		
JUDO 0562	Labor Law	
JUDO 0571	International Taxation	
or JUDO 093 International Taxation		
or JUDO J57 International Taxation		
JUDO 0592	State & Local Taxation	
or MLTX 05C State & Local Taxation		
or MLTX G5 State and Local Taxation		
JUDO 0601	Sports Law	
or JUDO 087 Sports Law		
JUDO 0615	Health Care Law: Regulation and Financing	
or JUDO 081 Health Care: Reg & Financng		
JUDO 0625	Employment Law	
JUDO 0637	International Commercial Transactions	
JUDO 0641	Taxation II: Commercial and Property Transactions	
JUDO 0654	Business Immigration Law	
JUDO 0659	The Global Workplace	
or JUDO 095 The Global Workplace		
or JUDO J95 The Global Workplace		
JUDO 0662	Drafting and Negotiating Real Estate Documents	
JUDO 0673	Taxation of S Corporations	
JUDO 0676	Legal Issues in Business Strategic Planning	
JUDO 0685	Oil and Gas Law	
JUDO 0688	The Role of In-House Counsel	
JUDO 0689	Franchise Law	
JUDO 0691	International Financial Law	
JUDO 0702	Business Law	
JUDO 0805	Employment Discrimination	
JUDO 0809	Collective Bargaining	
JUDO 0887	Real Estate Transactions	
or JUDO 051 Real Estate Transactions		
JUDO 0991	International Development Law and Policy	
or JUDO J65 International Development and Policy Law		
or JUDO J99 International Development and Policy Law		
JUDO 1014	Emerging Trends in Labor Law	
JUDO 1017	Privacy in Employment Law	
JUDO 1021	Tax Policy and Administration Colloquium	
JUDO 1029	Advanced Financial Regulation: Corporate Scandals and Crises	
JUDO 1047	Internet Law	
or JUDO 502 Internet Law		
JUDO 1051	Environmental Compliance and Enforcement	
or JUDO 505 Environmental Compliance and Enforcement		
JUDO 1052	International Compliance	
or JUDO 501 International Compliance		
or JUDO J61 International Compliance		
JUDO 1058	Lawyering for Entrepreneurship	
JUDO 1061	Payment Systems	

	or JUDO 057	Payment Systems
JUDO 1064		International Trade Law
	or JUDO 5060	International Trade Law
JUDO 5020		Commercial Arbitration Law and Procedure
JUDO 5024		International Commercial Arbitration
JUDO 5026		Nonprofit Organizations
JUDO 5030		Negotiating and Documenting Corporate Transactions
JUDO 5031		Commercial Transactions
JUDO 5042		Introduction to Compliance and Ethics
	or JUDO J654	Introduction to Compliance
	or MLAI C545	Introduction to Compliance
JUDO 5043		Health Care Fraud: Investigation, Prosecution, and Compliance
JUDO D462		Integrated Transactional Program <sup>3</sup>
JUDO J104		East/West Negotiation
JUDO J112		International Finance
JUDO J464		International Contract Drafting
	or JUDO J92	International Contract Drafting
	or JUDO R4	Intrnl Contract Drafting
JUDO J553		Copyright Law
JUDO J591		Intl Securities Regulatn
JUDO R120		Intrnl Fiscal Policy
MLTX 0520		Real Estate Taxation
	or MLTX G5	Real Estate Taxation
MLTX 0801		Intro Employee Benefits
	or MLTX G801	Intro Employee Benefits
MLTX G509		Taxation of Executive Compensation
MLTX G514		Taxation of Exempt Organizations
MLTX G525		Qualified Employee Benefit Plans
MLTX G526		Welfare Benefit Plans
MLTX G804		Tax Provsn Corp Acquistn
		Business-Related Practicum

**Total Credit Hours** **30**

1

Students who take more than four courses from the Core list may count the additional core course(s) taken as electives.

2

JD/MBA students may substitute an appropriate number of credits from MBA courses that cover equivalent content for JUDO 0525 and JUDO 0570.

3

The Integrated Transactional Program (ITP) alone counts as four elective courses. Thus, students who enroll in JUDO D462 do not need to take any other electives.

## Contacts

### Certificate Program Web Address:

<https://law.temple.edu/academics/degrees/jd/certificates/business-law/>

### Department Information:

Office of Academic Affairs

Temple University Beasley School of Law  
1719 N. Broad Street, 103 Barrack Hall  
Philadelphia, PA 19122-6002  
jennifer.bretschneider@temple.edu  
215-204-2380

### Department Contacts:

*Assistant Dean for Students:*

Jennifer Bretschneider

Associate Professor of Law and Director of Experiential Programs

jennifer.bretschneider@temple.edu

215-204-2380

## Juris Doctor Certificate: Trial Advocacy and Litigation

BEASLEY SCHOOL OF LAW

### About the Certificate

The Juris Doctor certificate in Trial Advocacy and Litigation is designed for students who want to focus their studies on the art and science of trial advocacy. At Beasley School of Law, JD students gain the skills and experience to be ready for the courtroom upon completion of their studies. While pursuing their JD degree, students in the Trial Advocacy and Litigation certificate program take a minimum of eight law courses, receiving a notation on their transcript upon successful completion.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis.

**Non-Matriculated Student Policy:** The certificate may not be taken on a non-matriculated basis.

### Admission Requirements and Deadlines

**Application Deadline:**

Eligible students complete a registration form and return it to Professor Sara Jacobson in 611 Klein Hall.

**Coursework Required for Admission Consideration:** Applicants must be pursuing the Juris Doctor degree.

**Master's Degree in Discipline/Related Discipline:** Not required.

**Bachelor's Degree in Discipline/Related Discipline:** Not required.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 19-23, depending on the student's choice of eight required courses

*Required Courses:*

**Second-Year Day / Third-Year Evening**

Code	Title	Credit Hours
<b>Integrated Trial Advocacy Program (ITAP) Courses</b>		
JUDO 0460	Trial Advocacy I (Fall)	2
JUDO 0461	Trial Advocacy II (Spring)	3
JUDO 0517	Civil Procedure II (Spring)	2-3
JUDO 0540	Evidence (Fall)	3
<b>Total Credit Hours</b>		<b>10-11</b>

**Third-Year Day / Fourth-Year Evening**

Code	Title	Credit Hours
	LLM Litigation Strategy Lectures	0
	All students select courses from Menu A, Menu B, and Clinical, as shown on their Certificate Registration form: <sup>1</sup>	9-12

**Menu A <sup>2</sup>**

JUDO 0428	Pennsylvania Civil Procedure	
JUDO 0479	Appellate Advocacy	
or JUDO 0835	Appellate Advocacy	
JUDO 0505	Criminal Procedure II	
or JUDO 0903	Criminal Procedure II	
JUDO 0557	Interviewing, Negotiating and Counseling	
JUDO 0565	Advanced Trial Advocacy (Criminal)	
JUDO 0569	Advanced Trial Advocacy (Civil)	
JUDO 0655	Mediation Advocacy & Practice	
JUDO 0669	Advanced Trial Advocacy (Speech Making)	
JUDO 0681	Public Advocacy for Social Change	
JUDO 0883	Complex Civil Litigation	
JUDO 0928	Intrnl Litgtn & Arbitrtn	
JUDO 0999	Anatomy for Litigators	
JUDO 1015	LRW III: Civil Motions Practice	
JUDO 1027	Innocence and Wrongful Convictions	
JUDO 1042	Legal Research and Writing III: Experts in Civil Litigation	
JUDO 1053	Mindful Lawyering: Techniques for Effective Counseling, Negotiation and Advocacy	
or JUDO 5054	Mindful Lawyering: Techniques for Effective Counseling, Negotiation and Advocacy	
JUDO 5020	Commercial Arbitration Law and Procedure	
JUDO 5034	Social Justice Lawyering Seminar	
	Moot Court: one year's participation	
	Trial Team: one year's participation	

**Menu B <sup>2</sup>**

JUDO 0450	Envrnmntl Lit/Superfund	
JUDO 0471	Patent Prosecution	
JUDO 0515	Media and Telecommunications Law	
JUDO 0522	Conflict of Laws	
JUDO 0537	Employment Discrimination	
JUDO 0542	Federal Courts and Jurisdiction	
JUDO 0560	Juvenile Justice	
JUDO 0578	Political and Civil Rights	
or JUDO 1006	Political and Civil Rights	

	or JUDO 1065	Political and Civil Rights	
JUDO 0614	Health Care Law: Medical Malpractice		
or JUDO 0874	Health Care Law: Medical Malpractice		
JUDO 0625	Employment Law		
JUDO 0647	Federal Criminal Law		
JUDO 0665	International Criminal Law		
JUDO 0666	E-Discovery: Preservation through Presentation in the Digital Age		
JUDO 0839	Supreme Ct/Current Term		
JUDO 0972	Citiznshp Immgrtn Refugee		
JUDO 0975	Death Penalty		
JUDO 1026	Access to Justice in Civil Matters		
JUDO 1030	Forensic Evidence, Science, and Medicine		
JUDO 1033	Families in Law and Public Policy		
JUDO 1069	ICC Moot Court		
JUDO 1080	Legal Research Writing III: Legal Drafting Seminar		
JUDO 5029	Drug and Medical Device Law		
JUDO 5043	Health Care Fraud: Investigation, Prosecution, and Compliance		
JUDO 5059	Drug Law Policy and Practice: Marijuana Regulation		
MLTX G503	Crim Tax Litigatn/Procdr		
<b>Clinical <sup>3</sup></b>			
JUDO 0700	Tort Litigation and Trial Practice (SEPTA)		
JUDO 0704	Temple Legal Aid Office: Family Law Litigation Clinic		
JUDO 0713	Small Claims Mediation		
JUDO 0716	Criminal Defense Advocacy: Defender Association of Philadelphia		
JUDO 0717	Federal Criminal Practice: Federal Defender		
JUDO 0720	Criminal Prosecution: Philadelphia District Attorney		
JUDO 0724	Federal Criminal Practice: United States Attorney		
JUDO 0726	Federal Judicial Clerkship		
JUDO 0730	Elderly Law Project		
JUDO 0731	Philadelphia Housing Court		
JUDO 0735	City Solicitor: Claims Litigation		
JUDO 0738	Temple Legal Aid Office: Domestic Relations Mediation		
JUDO 0741	Philadelphia District Attorney: Charging Unit		
JUDO 0751	Ethics in Practice <sup>4</sup>		
JUDO 0752	Pennsylvania Innocence Project		
JUDO 0753	Consumer Bankruptcy Assistance Project		
JUDO 0756	State Judicial Clerkship		
JUDO 0776	Temple Legal Aid Office: Advanced Family Law Litigation Clinic <sup>5</sup>		
JUDO 0781	Social Justice Lawyering Clinic		
JUDO 0790	Access to Justice Clinic		
JUDO 0795	Advanced Clinical Intensive: Community Lawyering Temple Legal Aid Office <sup>5</sup>		

**Total Credit Hours****9-12**

1

Day students take two courses from Menu A, one course from Menu B, and one clinical from the approved list. Evening students take two courses from Menu A and two courses from Menu B if unable to take an approved clinical.

2

Any course in Menu A may count as a Menu B course, but no Menu B course may count as a Menu A course.

3

Day students select one clinical. In addition, a second clinical may be substituted for their Menu B course.

4

JUDO 0751 or a practicum may only count toward the clinical requirement with prior approval from the Director of Trial Advocacy.

5

Advanced work in the Temple Legal Aid Office for either the Family Law Clinic or the Community Lawyering Office can only count toward the clinical requirement with prior approval from the Director of Trial Advocacy.

**GPA Required to be Awarded the Certificate:** 3.0 minimum in advocacy coursework, with a 2.5 minimum overall

**Culminating Events:** Beyond coursework, all students are required to fulfill two additional obligations to earn the Trial Advocacy and Litigation certificate:

1. Serve as either a Teaching Assistant for the Integrated Trial Advocacy Program (ITAP), Introduction to Trial Advocacy (ITA), or Advanced Trial Advocacy (ATA); a witness for the LLM program's weekend trials; or a witness at the Regional Championship of the National Trial Competition hosted by Temple each February.
2. Complete the LLM lecture series, which requires attendance at five lectures. In-person attendance is required. Lectures are generally held in Room 1C from 6:00 to 9:00 p.m. Lecture topics include:
  - Advanced Experts
  - Damages: Depositions
  - Damages: Experts
  - Depositions II
  - eDiscovery and Litigation
  - Expert Witnesses
  - Persuasion: Lawyer Likability and Civility
  - Persuasive Pleadings
  - Psychology and Persuasion
  - Science Series: Accident Reconstruction
  - Science Series: Neuroscience and the Law
  - Trial Technology
  - Voir Dire and Jury Selection
  - Witness Preparation
  - Witnesses and Storytelling

If a class conflict prevents a student from attending in person, the lecture may be viewed on Canvas but only with advance permission from the Director of Trial Advocacy. Lecture dates are subject to change, depending on the needs of the LLM program. Changes

are announced on Canvas as soon as the need for a change is determined.

## Contacts

### Certificate Program Web Address:

<https://law.temple.edu/academics/degrees/jd/certificates/litigation/>

### Submission Address for Application Materials:

Complete and submit a registration form to Professor Sara Jacobson in 611 Klein Hall.

### Department Contacts:

*Director of Trial Advocacy:*  
 Sara Jacobson  
 Associate Professor of Law  
[sara.jacobson@temple.edu](mailto:sara.jacobson@temple.edu)  
 215-204-0661

## College of Liberal Arts

Home to 15 departments, the College of Liberal Arts (CLA) offers students a small liberal arts college experience within a premier research university setting. The College and its departments are at the forefront of research within their various fields.

CLA is home to more than 5,000 students, both graduate and undergraduate, who learn in seminar-style classes, conduct research with award-winning faculty, and gain real-world experience in the field. Our graduates build the essential skills valued in the workplace: critical reading, careful thinking and effective communicating. Through our graduate degree programs, students in the College of Liberal Arts are equipped to become vanguards of integrated and innovative thinking.

Graduate students and faculty regularly win awards and accolades for their scholarship. Recent honors include:

- American Psychological Association (APA) Distinguished Scientific Lecturer Award
- APA Student Research Award in Clinical Psychology
- APA Toy Caldwell-Colbert Award for Distinguished Educator in Clinical Psychology
- Anxiety and Depression Association of America Clinician Trainee Award
- Fulbright Scholarship
- Goldsmith Book Prize from the Shorenstein Center on Media, Politics and Public Policy at Harvard University's Kennedy School of Government
- Lindau (Germany) Nobel Laureate Meetings invitation
- National Endowment for the Humanities Summer Institute invitation
- National Humanities Center Fellowship
- National Science Foundation Graduate Research Fellowship
- Pew Fellowship
- Society for Research in Adolescence Emerging Scholar Travel Award
- Sundance Film Festival selection

## Graduate Programs and Certificates

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- Graduate Certificate: Police Leadership (p. 432)
- Graduate Certificate: Public Policy (p. 432)
- Graduate Certificate: Spanish for Health Professions (p. 434)

## Graduate Faculty

*Casarae Abdul-Ghani*, Assistant Professor, Department of English, College of Liberal Arts; PhD, Purdue University.

*Zain Abdullah*, Associate Professor, Department of Religion, College of Liberal Arts; PhD, The New School for Social Research.

*Elizabeth Adams*, Instructor, Department of Criminal Justice, College of Liberal Arts; PhD, Michigan State University.

*Hiram Aldarondo*, Associate Professor, Department of Spanish and Portuguese, College of Liberal Arts; PhD, University of Chicago.

*Lauren B. Alloy*, Laura H. Carnell Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, University of Pennsylvania.

*Rebecca T. Alpert*, Professor Emerita, Department of Religion, College of Liberal Arts; PhD, Temple University.

*Eli Alshanetsky*, Assistant Professor, Department of Philosophy, College of Liberal Arts; PhD, New York University.

*Nilgün Anadolu-Okur*, Professor, Department of Africology and African American Studies, College of Liberal Arts; PhD, Hacettepe University.

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*Daniel W. Berman*, Professor, Department of Greek and Roman Classics, College of Liberal Arts; PhD, Yale University.

*Lila Corwin Berman*, Professor, Department of History, College of Liberal Arts; PhD, Yale University.

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*Erwin A. Blackstone*, Professor, Department of Economics, College of Liberal Arts; PhD, University of Michigan.

*Khalid Y. Blankinship*, Professor, Department of Religion, College of Liberal Arts; PhD, University of Washington.

*Michael L. Bognanno*, Professor, Department of Economics, College of Liberal Arts; PhD, Cornell University.

*Aryeh I. Botwinick*, Professor, Department of Religion, College of Liberal Arts; PhD, Princeton University.

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*Lee-Ann Chae*, Assistant Professor, Department of Philosophy, College of Liberal Arts; PhD, University of California Los Angeles.

*Sanjoy Chakravorty*, Professor, Department of Geography and Urban Studies, College of Liberal Arts; PhD, University of Southern California.

*Colin Chamberlain*, Associate Professor, Department of Philosophy, College of Liberal Arts; PhD, Harvard University.

*Jason M. Chein*, Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, University of Pittsburgh.

*Eunice Y. Chen*, Associate Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, University of Sydney.

*Eugene Chislenko*, Assistant Professor, Department of Philosophy, College of Liberal Arts; PhD, University of California Berkeley.

*Elise Chor*, Assistant Professor, Department of Political Science, College of Liberal Arts; PhD, University of Chicago.

*Bettye Collier-Thomas*, Professor, Department of History, College of Liberal Arts; PhD, George Washington University.

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*Nyron Crawford*, Assistant Professor, Department of Political Science, College of Liberal Arts; PhD, The Ohio State University.

*Heath Fogg Davis*, Professor, Department of Political Science, College of Liberal Arts; PhD, Princeton University.

*Richard E. Deeg*, Professor, Department of Political Science, College of Liberal Arts; PhD, Massachusetts Institute of Technology.

*Kevin J. Delaney*, Professor, Department of Sociology, College of Liberal Arts; PhD, State University of New York Stony Brook.

*Dimitrios I. Diamantaras*, Associate Professor, Department of Economics, College of Liberal Arts; PhD, University of Rochester.

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*Deborah A. G. Drabick*, Associate Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, State University of New York at Stony Brook.

*Douglas Duckworth*, Professor, Department of Religion, College of Liberal Arts; PhD, University of Virginia.

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*Cristina Gragnani*, Associate Professor, Department of French, German, Italian and Slavic, College of Liberal Arts; PhD, Harvard University.

*Peter Gran*, Professor, Department of History, College of Liberal Arts; PhD, University of Chicago.

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*Victor Gutierrez-Velez*, Assistant Professor, Department of Geography and Urban Studies, College of Liberal Arts; PhD, Columbia University.

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*Espen Hammer*, Professor, Department of Philosophy, College of Liberal Arts; PhD, The New School for Social Research.

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*Katherine Henry*, Associate Professor Emerita, Department of English, College of Liberal Arts; PhD, Rutgers University.

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*Matthew Hiller*, Associate Professor, Department of Criminal Justice, College of Liberal Arts; PhD, Texas Christian University.

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*Roselyn Hsueh*, Associate Professor, Department of Political Science, College of Liberal Arts; PhD, University of California Berkeley.

*Brian J. Hutler*, Assistant Professor, Department of Philosophy, College of Liberal Arts; PhD, University of California Los Angeles.

*Richard H. Immerman*, Professor Emeritus, Department of History, College of Liberal Arts; PhD, Boston College.

*Veronica Jacome*, Assistant Professor, Department of Geography and Urban Studies, College of Liberal Arts; PhD, University of California Berkeley.

*Johanna Jarcho*, Assistant Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, University of California Los Angeles.

*Wilbert L. Jenkins*, Associate Professor, Department of History, College of Liberal Arts; PhD, Michigan State University.

*Rhiannon Jerch*, Assistant Professor, Department of Economics, College of Liberal Arts; PhD, Cornell University.

*Jayasinhji Jhala*, Associate Professor Emeritus, Department of Anthropology, College of Liberal Arts; PhD, Harvard University.

*C. Amari Johnson*, Assistant Professor, Department of Africology and African American Studies, College of Liberal Arts; PhD, University of Texas at Austin.

*Peter R. Jones*, Professor, Department of Criminal Justice, College of Liberal Arts; PhD, Aberystwyth University.

*Priya Joshi*, Professor, Department of English, College of Liberal Arts; PhD, Columbia University.

*Joyce A. Joyce*, Professor, Department of English, College of Liberal Arts; PhD, University of Georgia.

*Artemy M. Kalinovsky*, Professor, Department of History, College of Liberal Arts; PhD, London School of Economics and Political Science.

*Andrew Karpinski*, Associate Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, University of Michigan.

*Michael W. Kaufmann*, Associate Professor, Department of English, College of Liberal Arts; PhD, Columbia University.

*Philip C. Kendall*, Laura H. Carnell and Distinguished University Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, Virginia Commonwealth University.

*Dustin Kidd*, Associate Professor, Department of Sociology, College of Liberal Arts; PhD, University of Virginia.

*Joshua Klugman*, Associate Professor, Department of Sociology, College of Liberal Arts; PhD, Indiana University.

*Robin A. Kolodny*, Professor, Department of Political Science, College of Liberal Arts; PhD, Johns Hopkins University.

*Rita Krueger*, Associate Professor, Department of History, College of Liberal Arts; PhD, Harvard University.

*Mindie Lazarus-Black*, Professor Emerita, Department of Anthropology, College of Liberal Arts; PhD, University of Chicago.

*Don Lee*, Professor, Department of English, College of Liberal Arts; MFA, Emerson College.

*Sue-Im Lee*, Associate Professor, Department of English, College of Liberal Arts; PhD, University of Illinois at Chicago.

*Michael A. Leeds*, Professor, Department of Economics, College of Liberal Arts; PhD, Princeton University.

*Mark A. Leuchter*, Professor, Department of Religion, College of Liberal Arts; PhD, University of Toronto.

*Judith A. Levine*, Associate Professor, Department of Sociology, College of Liberal Arts; PhD, Northwestern University.

*Laura S. Levitt*, Professor, Department of Religion, College of Liberal Arts; PhD, Emory University.

*Xiaojiang Li*, Assistant Professor, Department of Geography and Urban Studies, College of Liberal Arts; PhD, University of Connecticut.

*Vasiliki M. Limberis*, Professor Emerita, Department of Religion, College of Liberal Arts; ThD, Harvard University.

*Jay B. Lockenour*, Professor, Department of History, College of Liberal Arts; PhD, University of Pennsylvania.

*Peter Logan*, Professor Emeritus, Department of English, College of Liberal Arts; PhD, University of California Berkeley.

*Martin Lopez-Daneri*, Assistant Professor, Department of Economics, College of Liberal Arts; PhD, University of Iowa.

*Gerardo Augusto Lorenzino*, Professor, Department of Spanish and Portuguese, College of Liberal Arts; PhD, Graduate Center, City University of New York.

*Kevin Loughran*, Assistant Professor, Department of Sociology, College of Liberal Arts; PhD, Northwestern University.

*Hilary Iris Lowe*, Associate Professor, Department of History, College of Liberal Arts; PhD, University of Kansas.

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*Alan McPherson*, Professor, Department of History, College of Liberal Arts; PhD, University of North Carolina at Chapel Hill.

*Patricia Melzer*, Associate Professor, Department of French, German, Italian and Slavic, College of Liberal Arts; PhD, Clark University.

*Jeremy Mennis*, Professor, Department of Geography and Urban Studies, College of Liberal Arts; PhD, The Pennsylvania State University.

*Nichole E. Miller*, Associate Professor, Department of English, College of Liberal Arts; PhD, University of California Irvine.

*Robin N. Mitchell-Boyask*, Professor, Department of Greek and Roman Classics, College of Liberal Arts; PhD, Brown University.

*Katherina Motyl*, Assistant Professor, Department of History, College of Liberal Arts; PhD, University of Chicago.

*Gary A. Mucciaroni*, Professor, Department of Political Science, College of Liberal Arts; PhD, University of Wisconsin-Madison.

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*Shigenori Nagatomo*, Professor, Department of Religion, College of Liberal Arts; PhD, University of Hawaii.

*Kimani Nehusi*, Associate Professor, Department of Africology and African American Studies, College of Liberal Arts; PhD, University College of London.

*Harvey R. Neptune*, Associate Professor, Department of History, College of Liberal Arts; PhD, New York University.



*Nora S. Newcombe*, Laura H. Carnell Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, Harvard University.

*Jessica M. Newman*, Assistant Professor, Department of Anthropology, College of Liberal Arts; PhD, Yale University.

*Steven L. Newman*, Associate Professor, Department of English, College of Liberal Arts; PhD, Johns Hopkins University.

*David Nickerson*, Professor, Department of Political Science, College of Liberal Arts; PhD, Yale University.

*Melissa E. Noel*, Assistant Professor, Department of Criminal Justice, College of Liberal Arts; PhD, University at Albany, State University of New York.

*Daniel T. O'Hara*, Professor Emeritus, Department of English, College of Liberal Arts; PhD, Temple University.

*Thomas Olino*, Associate Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, State University of New York at Stony Brook.

*Lauren Olsen*, Assistant Professor, Department of Sociology, College of Liberal Arts; PhD, University of California San Diego.

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*Jessica Roney*, Associate Professor, Department of History, College of Liberal Arts; PhD, Johns Hopkins University.

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*Adam Joseph Shellhorse*, Associate Professor, Department of Spanish and Portuguese, College of Liberal Arts; PhD, University of California Berkeley.

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*Roland L. Williams Jr.*, Professor, Department of English, College of Liberal Arts; PhD, University of Pennsylvania.

*Mathieu E. Wimmer*, Assistant Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, University of Pennsylvania.

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*David Wolfsdorf*, Professor, Department of Philosophy, College of Liberal Arts; PhD, University of Chicago.

*Jennifer D. Wood*, Professor, Department of Criminal Justice, College of Liberal Arts; PhD, University of Toronto.

*Alese Wooditch*, Associate Professor, Department of Criminal Justice, College of Liberal Arts; PhD, George Mason University.

*Matt Wray*, Associate Professor, Department of Sociology, College of Liberal Arts; PhD, University of California Berkeley.

*Hongling Xie*, Associate Professor, Department of Psychology and Neuroscience, College of Liberal Arts; PhD, University of North Carolina at Chapel Hill.

*Sean Yom*, Associate Professor, Department of Political Science, College of Liberal Arts; PhD, Harvard University.

*Amarat Zaatut*, Assistant Professor, Department of Criminal Justice, College of Liberal Arts; PhD, Rutgers University.

*Janire Zalbidea*, Assistant Professor, Department of Spanish and Portuguese, College of Liberal Arts; PhD, Georgetown University.

*Lu Zhang*, Associate Professor, Department of Sociology, College of Liberal Arts; PhD, Johns Hopkins University.

*Shanyang Zhao*, Professor, Department of Sociology, College of Liberal Arts; PhD, University of Maryland.

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*Adam Ziegfeld*, Associate Professor, Department of Political Science, College of Liberal Arts; PhD, Massachusetts Institute of Technology.

## Africology and African American Studies MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Africology and African American Studies.

### About the Program

The mission of the Department of Africology and African American Studies is to provide an intellectual arena in which students learn to critically examine, analyze and interpret the experiences, traditions and dynamics of people of African descent. The department's undergirding philosophy is that the specific historical experiences of a people must

be the central axis guiding and informing any effective analysis and interpretation of that people's past, present and future.

Our graduate program is informed by the Afrocentric paradigm in relation to other perspectives in Africana studies. The program reflects a deeply ingrained commitment to the self-directed study of African peoples and has benefited from a variety of conceptual and political inputs from diverse, but fully committed, faculty participation as well as invaluable contributions from the community.

The MA program seeks to answer the personal and intellectual aspirations of the student and the particular needs of society that are not satisfied by a baccalaureate degree. Thus, the MA provides more specialized study in Africology and African American Studies than the BA or BS degree and often serves as the terminal degree. It is the goal of the department that graduates with an MA in Africology and African American Studies be prepared to engage in a diverse range of intellectual issues that affect the lives of Africans on the continent and in the diaspora. The MA also serves as a strong foundation for those who intend to apply to the PhD program.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Although the program is firmly grounded in the Afrocentric paradigm, students may be encouraged or required by their advisors to take courses in other departments in order to enhance or supplement their program of study.

**Affiliation(s):** Faculty are affiliated with a variety of professional organizations such as the African Heritage Studies Association (AHSA); African Literature Association; African Studies Association (ASA); American Anthropological Association (AAA); Association of Black Women Historians (ABWH); Association for the Study of African American Life and History (ASALH); Association for the Study of Classical African Civilizations (ASCAC); Black History Advisory Committee of the Pennsylvania Historical and Museum Commission; Caribbean Studies Association (CSA); College Language Association (CLA); Haitian Studies Association (HSA); Modern Language Association (MLA); National Council for Black Studies (NCBS); Pennsylvania Humanities Council; TESOL International Association; and Temple University's Young Scholars Program.

**Study Abroad:** The department offers study abroad in the Temple University Ghana program. A maximum of 6 credits may be applied toward the master's degree.

**Accreditation:** This program is accredited by the National Council for Black Studies.

**Areas of Specialization:** Faculty specialize, offer substantial coursework, and mentor in a variety of areas, including:

- African and African American History
- African and African American Literature
- African American Drama
- African American Homeschooling
- African American Psychology
- African Civilizations

- African Languages
- African Spiritual Systems
- Afrocentric Education
- Afrocentric Theory
- Caribbean Culture and History
- Cultural Studies
- Ethnographic Methods
- Gender Studies
- Linguistics
- Mass Media
- Narrative Tradition
- Popular Culture
- Research Methods
- Social and Political Thought

**Job Prospects:** Graduates of the MA program in Africology and African American Studies find employment in a variety of public and private sector areas, including arts and humanities, business, social services and teaching. Many secondary school teachers desire to enhance their skills by obtaining an MA degree in Africology and African American Studies.

**Non-Matriculated Student Policy:** A non-matriculated student may take a maximum of 9 credits in the department. Those credits may be applied to the degree if the student applies and is admitted to the degree program. Non-matriculated students may not take AAAS 9982 Individual Research in African American Studies.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15  
*Spring:* November 1

Applications for admission are processed together shortly after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation are preferred from college/university professors who have taught or worked with the applicant in their major or minor area of concentration.

**Coursework Required for Admission Consideration:** An applicant is expected to have a sound academic background in Africology and African American Studies.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 500 to 1,000 words, share your specific interest in Temple's Department of Africology and African American Studies; your research goals as they relate to Africology and African American Studies and to the social relevance of the discipline; your future career goals; and your academic and research achievements.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

**Interview:** An interview may be required.

**Writing Sample:** The writing sample should demonstrate the student's ability to conduct research and to write a scholarly paper relevant to the discipline. The paper should be no more than 20 pages in length and fully referenced according to a professional, scholarly style manual.

**Transfer Credit:** During the first term of enrollment at Temple, incoming graduate students may apply to have graduate credits taken at other accredited institutions count toward completion of the degree. Grades of transfer courses must be "B" or better. After consultation with and approval of the advisor, the student must submit to the Graduate Committee:

1. a letter specifying the course(s) the student wishes to have considered for credit toward the MA or PhD as well as the corresponding Temple course related to the transfer course; and
2. supporting documents (i.e., syllabi, course descriptions from college catalogs, a letter from the transfer course instructor or department) showing the overlap by which the course covers material from Temple courses.

The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Didactic Credits Required Beyond the Baccalaureate:* 30

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
AAAS 8002	African Civilizations	3
AAAS 8004	Theories and Methods in African American Studies	3
AAAS 8009	The Afrocentric Paradigm	3
<b>Electives</b>		<b>21</b>
<b>Total Credit Hours</b>		<b>30</b>

### Culminating Events:

Students have the option of completing the program with either a written comprehensive examination or a thesis.

### Comprehensive Examination:

The comprehensive examination is intended to probe the student's knowledge of content, literature, theory/methodology and methods in Africology and African American Studies and to test the student's ability to apply theoretical issues to praxis. It is a proctored, closed book, 6-hour written examination. Students may not use a computer or any other

electronic device for the examination unless there is a documented medical necessity.

The MA comprehensive exam covers the content, theories and paradigms of the discipline and/or relevant coursework that students may have taken. Students must take the comprehensive exam after completing all required coursework. The student must answer every question on the examination in order to be evaluated. The evaluators look for content mastery and coherent application of the discipline's theories and paradigms.

The comprehensive examination is offered twice a year: the first week of April and the first week of November. The hours of the exam are from 9:00 a.m. to 12:00 noon and 1:00 p.m. to 4:00 p.m. The student must schedule their examination with the Graduate Secretary after consultation with their advisor at least one month in advance of the exam date. In order to arrange an examination date, the student must be sure that their record is free of encumbrances that would prevent them from meeting University requirements for taking the examination. In addition, the student intending to take the exam must ensure that all of their coursework has been completed in the previous term.

The Examination Committee prepares and administers the student's written MA comprehensive exam. Students are advised to choose an Examination Committee at the beginning of their final term. They should consult with their graduate advisor to select the second member of the committee and set the date for the comprehensive exam. The Examination Committee is composed of two Graduate Faculty from the Department of Africology and African American Studies, one of whom is the major advisor who will write one half of the questions, while the other committee member will provide the remaining questions.

The Examination Committee evaluates the answers. The Graduate Director notifies the student of the comprehensive exam results no later than five weeks after completion of the exam. Based on the quality of the examination results, the Examination Committee may make one of the following determinations:

1. Pass: The MA student may receive a master's degree when all other departmental and University requirements are met.
2. Fail: The MA student is not awarded the MA degree, and the student may retake the exam once.
3. Fail/Termination: The MA student has failed to pass the written examination a second time and is terminated from graduate status in the department.

#### *Thesis:*

Students who choose to complete a thesis are given the opportunity to demonstrate specialized knowledge and their ability to do original research in Africana studies. The student must have completed at least 27 hours of coursework, including the core. The student then registers for AAAS 9996 Master's Thesis and completes a Master's Thesis Option form, duly signed by the student and the designated advisor. The student must work with the advisor to produce and successfully defend a thesis on an approved topic. The student then meets the requirements for submission of the approved thesis to the Graduate School, as stipulated in the Final Checklist section of the *Dissertation and Thesis Handbook* at <https://grad.temple.edu/resources/dissertation-thesis-handbook>.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/africology-and-african-american-studies-ma-la-aaas-ma>

### Department Information:

Dept. of Africology and African American Studies  
808 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
afam@temple.edu  
215-204-8491

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

#### *Admissions:*

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## Africology and African American Studies PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Africology and African American Studies.

## About the Program

The mission of the Department of Africology and African American Studies is to provide an intellectual arena in which students learn to critically examine, analyze and interpret the experiences, traditions and dynamics of people of African descent. The department's undergirding philosophy is that the specific historical experiences of a people must be the central axis guiding and informing any effective analysis and interpretation of that people's past, present and future.

Our graduate program is informed by the Afrocentric paradigms in relation to other perspectives in Africana studies. The program reflects a deeply ingrained commitment to the self-directed study of African peoples and has benefited from a variety of conceptual and political inputs from diverse, but fully committed, faculty participation as well as invaluable contributions from the community. It is the goal of the department that graduates of our PhD program be prepared to engage in a diverse range of intellectual issues that affect the lives of Africans on the continent and in the diaspora.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The majority of courses are offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Advisors may encourage or require students to take courses in other departments in order to enhance their research agenda. Students must obtain prior approval from their major advisor for any courses taken outside the Department of Africology and African American Studies that they want to use to fulfill departmental requirements. However, for personal and intellectual enrichment, a student may take as many external courses as desired.

**Affiliation(s):** Faculty are affiliated with a variety of professional organizations such as the African Heritage Studies Association (AHSA); African Literature Association; African Studies Association (ASA); American Anthropological Association (AAA); Association of Black Women Historians (ABWH); Association for the Study of African American Life and History (ASALH); Association for the Study of Classical African Civilizations (ASCAC); Black History Advisory Committee of the Pennsylvania Historical and Museum Commission; Caribbean Studies Association (CSA); College Language Association (CLA); Haitian Studies Association (HSA); Modern Language Association (MLA); National Council for Black Studies (NCBS); Pennsylvania Humanities Council; TESOL International Association; and Temple University's Young Scholars Program.

**Study Abroad:** The department offers study abroad in the Temple University Ghana program. A maximum of 6 credits may be applied toward the doctoral degree.

**Accreditation:** This program is accredited by the National Council for Black Studies.

**Areas of Specialization:** Applicants to the PhD program should have a clearly articulated research interest that fits within the department's faculty expertise. Africology and African American Studies is a discipline that draws from diverse academic fields. Most research areas fall into two general categories: the cultural aesthetic, which engages interests in the humanities, particularly history, literature and the performing arts; and the social behavioral, in which issues may be addressed under the

broad domains of sociology, psychology, political science, philosophy, anthropology and the like. Faculty specialize, offer substantial coursework and mentor in a variety of areas, including:

- African and African American History
- African and African American Literature
- African American Drama
- African American Homeschooling
- African American Psychology
- African Civilizations
- African Languages
- African Spiritual Systems
- Afrocentric Education
- Afrocentric Theory
- Caribbean Culture and History
- Cultural Studies
- Ethnographic Methods
- Gender Studies
- Linguistics
- Mass Media
- Narrative Tradition
- Popular Culture
- Research Methods
- Social and Political Thought

**Job Prospects:** Graduates of the PhD program in Africology and African American Studies generally find employment based on their area of concentration in academia, college and university administration, or public and private high school administration; the entertainment industry; the fields of criminal justice, journalism, public relations or social work; local, state and federal government; or nonprofit organizations.

**Non-Matriculated Student Policy:** Non-matriculated students who desire to take courses at the PhD level in the Department of Africology and African American Studies must first submit an academic transcript to the department's Graduate Director for review. The prospective non-matriculated student then receives a letter stating whether or not they are approved to take courses in the department. A maximum of 9 credits may be applied toward a degree if the student later matriculates. Non-matriculated students may not take AAAS 9982 Individual Research in African American Studies.

**Financing Opportunities:** The department offers a limited number of assistantships on a highly competitive basis. The awards usually involve teaching or assisting one or more faculty with instructional duties. Teaching Assistants receive a stipend and full tuition remission of up to 9 credits. The applicant must have a grade point average of 3.5 or better and strong letters of recommendation.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 15

*Spring:* November 1

Applications for admission are processed together shortly after the deadline date.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

Number Required: 3

*From Whom:* Letters of recommendation are preferred from college/university professors who have taught or worked with the applicant in their major or minor area of concentration.

**Coursework Required for Admission Consideration:** An applicant is expected to have a sound academic background in Africology and African American Studies.

**Master's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate master's degree at Temple University.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 500 to 1,000 words, share your specific interest in Temple's Department of Africology and African American Studies; your research goals as they relate to Africology and African American Studies and to the social relevance of the discipline; your future career goals; and your academic and research achievements.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

**Interview:** An interview may be required.

**Writing Sample:** The writing sample should demonstrate the student's ability to conduct research and to write a scholarly paper relevant to the discipline. The paper should be no more than 20 pages in length and fully referenced according to a professional, scholarly style manual.

**Transfer Credit:** During the first term of enrollment at Temple, incoming graduate students may apply to have graduate credits taken at other accredited institutions count toward completion of the degree. Grades of transfer courses must be "B" or better. After consultation with and approval of the advisor, the student must submit to the Graduate Committee:

1. a letter specifying the course(s) the student wishes to have considered for credit toward the PhD as well as the corresponding Temple course related to the transfer course; and
2. supporting documents (i.e., syllabi, course descriptions from college catalogs, a letter from the transfer course instructor or department) showing the overlap by which the course covers material from Temple courses.

The maximum number of credits a student may transfer is 18.

## Program Requirements

**General Program Requirements:**

Number of Credits Required to Earn the Degree: 51

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
AAAS 8002	African Civilizations	3
AAAS 8004	Theories and Methods in African American Studies	3
AAAS 8008	Ethnographic Methods	3
AAAS 8009	The Afrocentric Paradigm	3
AAAS 9642	Seminar in African American Social Philosophy	3
<b>Electives</b>		<b>30</b>
<b>Research Courses</b>		<b>6</b>
AAAS 9994	Preliminary Examination Preparation	
AAAS 9998	Pre-Dissertation Research	
AAAS 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>51</b>

**Language Examination:** The language requirement in Africology and African American Studies is intended to ensure that students have a working familiarity with a language and culture other than English and/or their native language. The PhD student may take the exam at any time, but must pass it before taking the preliminary examination. The student who has English as a second language may use English to fulfill the language requirement. With the recommendation of the advisor, a student may demonstrate competency in Statistics to fulfill the language requirement. The language examination must be administered and graded by a college/university affiliated or certified instructor in the exam language, but may not be from the Department of Africology and African American Studies. The results must be forwarded on letterhead attesting to the examiner's credentials. Temple University's various language departments offer non-credit language courses and administer examinations for graduate students needing to fulfill the language requirement.

**Culminating Events:**

*Preliminary Examination:*

The preliminary examination is intended to probe the student's knowledge of content, literature, theory/methodology and methods in Africology and African American Studies and to test the student's ability to apply theoretical issues to praxis. It is a proctored, closed-book, 12-hour written examination administered by the student's Examination Committee. Students are expected to take the preliminary examination upon completion of the coursework component of the program and upon satisfactory completion of the language requirement.

The student is strongly advised to choose an Examination Committee at the beginning of the term in which the last course is taken. The student should consult with their graduate advisor in selecting members of the Examination Committee and in setting the date for the exam. The student should then write to prospective members requesting that they serve on the committee. In the letter, the student should mention the course(s) taken with the professor, and include a copy of their statement of research interests and career goals. The faculty member should notify the student's advisor in writing of their agreement to serve on the committee.

The subject areas are chosen by the Examination Committee. Particular reading lists or specific materials may be suggested for review before the exam. The student's major advisor composes six hours of the examination, and the other members compose the balance. Examiners submit exam items directly to the Graduate Director. In order to take the exam, the student must register for AAAS 9994 Preliminary Examination Preparation.

The preliminary examination is offered twice a year: during the first week of April and the first week of November. The hours of the exam are from 9:00 a.m. to 12:00 noon and 1:00 p.m. to 4:00 p.m. The student should notify the Graduate Secretary of their intention to take the examination at least one month in advance after consultation with their advisor. The Graduate Secretary checks to ensure the student's records are free of encumbrances that would prevent them from meeting University requirements for taking the exam. If the student meets all requisites, the Graduate Secretary advises the student's Examination Committee that the exam will take place on the planned date.

Each member of the Examination Committee evaluates the student's exam question(s). The Graduate Director notifies the student of the preliminary exam results no later than five weeks after completion of the exam. Based on the quality of the examination results, the Examination Committee may make one of the following determinations:

1. Pass: The student passes the exam and may now write their dissertation proposal.
2. Fail: The student fails the written and/or oral examination, but may retake part or all of the examination once.
3. Fail/Termination: The student fails the written examination for the second time, may not retake the exam, and is dismissed from the program.

*Dissertation Proposal:*

The formal research proposal, usually at least 30 pages long, presents a plan for increasing the knowledge base in the discipline. The student works in concert with the Chair of the Doctoral Advisory Committee (DAC) to fine-tune the proposal. With the Chair's approval, the student submits the proposal to the other committee members who make suggestions for changes. When the entire committee is satisfied with the proposal, the student makes an oral presentation and defends the proposal, where other suggestions to strengthen the proposal can be made. After a successful oral defense, the proposal is submitted to the Graduate School, along with the "Dissertation Proposal Transmittal for Elevation to Candidacy" form, found in TUportal under the Tools tab within "University Forms."

*Dissertation:*

The dissertation is an original and definitive empirical study that makes a significant contribution to the field of Africology and African American Studies. It should add to the knowledge of one or more areas either by uncovering new information, providing an innovative synthesis of existing information, propounding a new theory, fine-tuning an existing theory, or offering a new interpretation substantiated by data. The length of the dissertation varies but should be in excess of 150 pages.

The DAC guides the candidate's doctoral research. This committee offers regular advice and expertise as the student collects data, researches, and writes the proposal and dissertation. The DAC must include at least three Graduate Faculty members from Temple University; two of them, including the Chair, must be from the Department of Africology and African American Studies. The DAC may be expanded to include other Temple University faculty (from within or outside the department) and/or

doctorally prepared experts from outside the University, provided that a majority of the committee members are Graduate Faculty members.

The function of the Dissertation Examining Committee (DEC) is to evaluate the dissertation and the student's performance in the oral defense to decide whether the candidate passes or fails. All members of the DEC must be physically present for the oral defense. Exceptions must be specifically approved in writing by the Graduate School. The DEC is composed of the DAC plus at least one additional reader who may be a Graduate Faculty member from Temple or another university, but cannot be a member of the Department of Africology and African American Studies.

A student must have an advisor at all times. However, it is possible that as the student's interests develop, they may find it desirable to change major advisors and/or advisory committees. The advisee/advisor relationship can be terminated by mutual consent with a note to the Graduate Director signed by both parties or by either party through negotiation with the Graduate Director, who must not at the time be serving as a member of the DAC. When the Graduate Director is also a member of the committee, then another member of the Graduate Faculty, appointed by the Department Chair, should serve as the negotiator between the student and the committee member. The student must complete a "Change of Advisor" form, which may be obtained from the Graduate Secretary. Once a defense date is set, no changes can be made in major advisor or committee membership.

When the Chair of the committee is satisfied with the dissertation draft, the Chair advises the student to distribute it to the other members of the committee. When the entire committee is satisfied with the draft, the student and Chair decide on an examination date. At the conclusion of the dissertation defense, the DEC may recommend either that the candidate passes or fails. After the student passes the dissertation defense, certification forms are signed by the committee members and forwarded to the Graduate School. Failure may call for substantial revisions and a new defense.

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and register with the Graduate Secretary. The Graduate Secretary arranges for the room; prepares the appropriate forms; sends copies of the announcement to the Graduate School and departmental Graduate Faculty; and posts the announcement on public bulletin boards. Every dissertation defense must be publicly announced in writing at least 10 working days prior to the defense and must be open to the academic community.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/africology-and-african-american-studies-phd-la-aaas-phd>

### Department Information:

Dept. of Africology and African American Studies  
808 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
afam@temple.edu  
215-204-8491



## Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

## Department Contacts:

### Admissions:

Admissions Coordinator  
afam@temple.edu  
215-204-8491

### Department Coordinator:

Linda Wyatt  
ldwyatt@temple.edu  
808 Gladfelter Hall  
215-204-8491

### Manager of Administration:

TJ Cusack  
tjc@temple.edu  
910 Gladfelter Hall  
215-204-9209

### Director of Graduate Studies:

Nilgun Anadolu-Okur, PhD  
Professor  
anadolu@temple.edu  
826 Gladfelter Hall  
215-204-8513

### Chairperson:

Ama Mazama, PhD  
Professor  
mcerol@temple.edu  
809 Gladfelter Hall  
215-204-1992

## Anthropology MA

COLLEGE OF LIBERAL ARTS

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Anthropology PhD

COLLEGE OF LIBERAL ARTS

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Applied Sociology PSM

COLLEGE OF LIBERAL ARTS

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Business Economics MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Business Economics.

### About the Program

The MA in Business Economics prepares the student to understand contemporary economic theory and its application to problems arising in industry, business and government. Students completing the program have the opportunity to sit for the certification exam to become a Certified Business Economist® (CBE).

**Time Limit for Degree Completion:** 3 years, although a student whose advisor certifies that satisfactory progress is being made may apply for an extension of the program for up to a maximum of 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 5:30 p.m. The degree program can be completed on a full- or part-time basis.

**Job Prospects:** The program is primarily dedicated to producing well-trained researchers and managers in the field of Economics. Many students go on to enter business and work in public policy.

**Licensure/Certification:** Students completing the program have the potential to sit for the Certified Business Economist® (CBE) examination. Developed and administered by the National Association for Business Economics (NABE), the CBE exam is based on an advanced body of knowledge that reflects the most relevant information and core competencies demanded by today's top employers.

The CBE designation is earned by demonstrating a mastery of applied economics and data analytics. The CBE exam constitutes a comprehensive multiple-choice assessment that tests a candidate's practical and applied knowledge of:

- Applied Econometrics
- Business Applications of Statistics and Data Analytics
- Economic Measurement
- Economics of Strategy and Managerial Decision Making
- Foundations of Macroeconomics/Microeconomics

For more information on the exam and certification, visit <https://www.nabe.com/cbe>.

**Non-Matriculated Student Policy:** Students may enroll in up to 9 credits with the permission of the Graduate Director. Minimum undergraduate GPA requirements apply.

**Financing Opportunities:** Financial aid may be available to students through the University. For information on financial aid, please contact Student Financial Services at 215-204-2244.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1, 2025

*Spring:* November 1, 2025

**\*\* APPLICATIONS will first be accepted for this upcoming program for FALL 2025 ADMISSION \*\***

Although students are admitted in both the Fall and Spring terms, applicants without previous graduate coursework in Economics are advised to apply for the Fall. Spring admission will only be granted when the student has taken the typical Fall term classes as a non-matriculated student. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 3*

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and/or immediate work supervisor.

**Coursework Required for Admission Consideration:** Details on appropriate background are available from the department upon request.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. Details on appropriate disciplines are available from the department.

**Statement of Goals:** In approximately 500 to 1,000 words, discuss your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Required. Scores are typically in the 60th to 99th percentile on the quantitative section and in the 45th to 99th percentile on the verbal section.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Transfer Credit:** A grade of "B" or better must have been earned in a peer MA program course in order for the credit to transfer. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
ECON 5011	Quantitative Methods in Economics	3
ECON 5113	Data Analytics for Economists	3
ECON 5201	Microeconomic Theory	3
ECON 5202	Macroeconomic Theory with Calculus	3
ECON 5901	Masters Writing Seminar	3
ECON 8009	Econometrics I <sup>1</sup>	3

<b>Electives</b> <sup>2</sup>	<b>12</b>
<b>Total Credit Hours</b>	<b>30</b>

1

Students with no undergraduate background in econometrics must first take ECON 5203 Introduction to Econometrics.

2

Students who plan to take the Certified Business Economist® exam offered by the National Association for Business Economics (NABE) must take ECON 5538 Economic Operations and Strategy as one of their electives.

**Culminating Event:** Successful completion of coursework is required to earn the MA in Business Economics degree.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/business-economics-ma-la-buec-ma>

### Department Information:

Dept. of Economics  
822 Ritter Hall Annex  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
econgrad@temple.edu  
215-204-8880

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Admissions:*  
Belinda Wilson  
Department Administrator  
bwilson@temple.edu  
215-204-0472

Janice Vincent  
Department Coordinator  
janice.vincent@temple.edu  
215-204-8880

*Graduate Director:*  
Pedro Silos, PhD  
pedro.silos@temple.edu

*Chairperson:*  
Michael Bognanno, PhD  
bognanno@temple.edu  
215-204-1680

## Creative Writing MFA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Fine Arts in Creative Writing.

## About the Program

The MFA program in Creative Writing provides fiction writers and poets with an opportunity to develop their craft and extend the horizon of their thinking about the genre in which they work. Workshops and other graduate courses in creative writing are the core of the program.

For greater detail, visit <https://liberalarts.temple.edu/academics/departments-and-programs/english/graduate/creative-writing/creative-writing-mfa>. Additional details are also available by downloading the MFA Information Packet.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed in two years with full-time study. Students who engage in part-time study may take up to three years to complete the degree. Classes are generally held during the day.

**Interdisciplinary Study:** With permission of the Program Director, students may take two literature, writing, arts, humanities or social science courses and one elective in departments outside of the English Department.

**Study Abroad:** Creative Writing students previously had the option to enroll in a 6-credit seminar in Art and Culture in Rome during the Summer term. The seminar entailed an intensive program of classwork, field trips and guest lectures. This course is now only offered infrequently.

**Areas of Specialization:** The program provides a combination of small, intensive workshops in poetry and fiction, in addition to one-on-one tutorials and craft and special topics courses in Creative Writing. Temple has an excellent faculty of writers in both genres, representing a wide range of aesthetics. To learn more about the faculty, see <https://liberalarts.temple.edu/about/faculty-staff/program/creative-writing-graduate-program/>.

**Job Prospects:** Graduates have become published authors and have been hired as faculty members at colleges and universities. Others have gone on to become editors in the field of publishing, Web content writers and editors, arts administrators, journalists, librarians, copywriters, grant writers, and primary and secondary school teachers, and have obtained jobs in advertising, communications, marketing and public relations. Books written by our graduates have been published by trade and small presses and cover all genres. These works have won grants, prizes and residencies.

**Non-Matriculated Student Policy:** Writers (or graduate students from other departments at Temple) who wish to take a class in the MFA program on a non-matriculated basis should inquire about the possibility first, emailing [mfaapplications@temple.edu](mailto:mfaapplications@temple.edu) at least two weeks before the start of the academic term about a specific course. Search Temple's class schedule by selecting the term, then "English" and "Graduate." If there is space and the instructor is amenable, you will most likely be asked for a writing sample and other information for further consideration. Upon admission to the program, non-matriculated students may transfer up to 9 credits for courses in which a grade of "B" or higher was earned.

**Financing Opportunities:** On average, the MFA program in Creative Writing is able to fund 40% of its students with Teaching Assistantships or University Fellowships. These funding packages are awarded on a

competitive basis. If you are admitted to the Creative Writing program, you will automatically be considered for an assistantship or fellowship.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 15

All materials should be submitted by February 15. If you would like to be considered for a teaching assistantship or fellowship, please submit your materials by December 15. Applications submitted after December 15 will still be considered for a teaching assistantship or fellowship, but those meeting the initial deadline will be prioritized.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from professors or work supervisors who can comment on your performance in previous academic, creative and/or professional roles.

**Coursework Required for Admission Consideration:** Although not required, we prefer applicants to the MFA program in Creative Writing to hold a bachelor's degree in English or creative writing or to have taken a significant number of workshops or literature classes as an undergraduate. However, in the past, students without this background have performed well in the program. Therefore, we consider the entire application package in our admission decisions.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, although it need not be in Creative Writing or English. An applicant must, however, display evidence of talent as a fiction writer or poet. A minimum undergraduate GPA of 3.0 is required for admission.

**Statement of Goals:** In two to four double-spaced pages, discuss literary influences and models that feed your creative work. We are interested in which writers and texts have been important to you in recent years, as well as what critical approaches, if any, you have found useful. Describe your work or teaching experience. Discuss your aims in attending an MFA program. Mention what attracts you to Temple's program and whether you are familiar with Philadelphia. Give us a sense of who you are—a more detailed, personal picture than what can be gleaned from transcripts or resumes, especially if you have a non-traditional background or atypical undergraduate record.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** A personal resume or curriculum vitae is required. Work experience, whether academic or non-academic, is as important as any publishing credits, particularly since the latter is not required or expected at this stage of the applicant's career. The resume/CV should identify

institutions, positions, duties and dates for all teaching and/or tutoring experience listed.

**Writing Sample:** Your writing sample is the most crucial single element of your application. Send a packet of writing in one genre only: poetry or fiction. For poetry, submit ten pages. These pages may include shorter poems, longer poems, and/or an excerpt from a longer project. Individual poems should be separated by page breaks, not run together. Poems may be single-spaced or formatted in whatever way you see fit. For fiction, send a total of 15 to 25 double-spaced pages. The pages may include a single story, a series of stories, and/or an excerpt from a longer work. Please identify the excerpt as part of a long story, novella, novel or hybrid work. For applicants in either genre, if you would like to include a critical essay in addition to the creative sample, please feel free to do so.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 33*

#### Required Courses:

Code	Title	Credit Hours
4	workshops	12
3	craft, manuscript tutorial, or special topics courses	9
2	literature, writing, arts, humanities, or social science courses	6
1	elective <sup>1</sup>	3
ENG 9995	Master's Project	3
<b>Total Credit Hours</b>		<b>33</b>
1		

Those who hold a Teaching Assistantship must take a Practicum in Composition Theory as their elective.

### Culminating Events:

#### *Comprehensive Examination:*

The comprehensive examination is intended to give students an opportunity to write about the historical and formal context of the literary genre in which they practice. For the exam, they write a 10 to 15 page essay.

The exam is due between the third and fourth terms of the program on the Friday immediately preceding the day on which the Spring term begins. The paper should address issues of craft and aesthetics, but may include other points of reference. The essay should demonstrate a facility for critical discourse and indicate a breadth of knowledge of literary traditions.

Each exam is graded by two members of the Creative Writing Graduate Faculty. Students pass the exam by writing cogent, well-argued, and stylistically polished arguments.

#### *Master's Project:*

The master's project is intended to be a work of fiction (at least 100 pages) or a work of poetry (at least 50 pages) that reflects an aesthetically and intellectually sophisticated example of the genre in which the student has worked over the course of the program. The project is due on the second Tuesday in April of the student's fourth term.

The master's project is graded exclusively by members of the Creative Writing Graduate Faculty. Two readers must agree that the project

passes. If there is a conflict, the Director of the Graduate Creative Writing Program adjudicates the decision. A project defense is not required.

## Contacts

### Program Web Address:

<https://liberalarts.temple.edu/academics/departments-and-programs/english/graduate/creative-writing>

### Department Information:

Creative Writing Program  
Mazur Hall, 10th Floor  
1114 Polett Walk  
Philadelphia, PA 19122-6090  
mfaapplications@temple.edu  
215-204-1796

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

#### *Admissions:*

Tara Lemma  
Graduate Coordinator  
tara.lemma@temple.edu  
215-204-1796

#### *Program Director:*

Don Lee, MFA  
donlee@temple.edu  
215-204-1796

#### *Chairperson:*

Roland Williams, PhD  
roland.williams@temple.edu  
215-204-7516

## Criminal Justice MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Criminal Justice.

### About the Program

The MA program in Criminal Justice is designed to serve as a first stage of training for students wishing to eventually pursue more advanced graduate work. It also prepares students who will terminate their studies at the master's level. For the latter group, including many engaged in part-time study, the MA program is designed to serve students who, upon graduation, will begin or rejoin professional careers in management, administration or specialist positions in governmental and private criminal and juvenile justice and related agencies. The MA degree requires the completion of 30 credits. The curriculum is structured around a set of core requirements that provides substantive grounding in decision-making and operational aspects of the criminal justice system, and a theoretical, legal, policy and methodological foundation for understanding crime and society.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Those engaged in part-time study take 8 or fewer credits per term. Students should note that classes are scheduled both during the day and evening as scheduling demands. Students are expected to be available for classes when they are scheduled.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interests in a wide range of fields. Many of the students entering the Criminal Justice MA program have backgrounds in Counseling, Economics, Geography, History, Political Science, Psychology, Social Work, Sociology, and Urban Studies.

**Ranking:** In the 2021 rankings by *U.S. News & World Report*, Temple University's Criminal Justice program was rated 14th in Criminology. In addition, *The Chronicle of Higher Education's* Faculty Scholarly Productivity Index identifies the faculty of the Criminal Justice department as the sixth most productive among all doctoral programs in Criminology and Criminal Justice.

**Areas of Specialization:** Faculty members specialize and offer substantial coursework in a wide array of areas, including:

- Corrections and community corrections
- Court processes
- Crime and the physical/social environment
- Criminal justice policy making and strategic management
- Criminal law
- Criminological theory
- Discretion in criminal justice
- Issues in policing
- Juvenile justice
- Organized crime
- Qualitative/quantitative research methods
- Restorative justice
- Socialization and deviant behavior
- Statistical analysis
- White collar crime

**Job Prospects:** The MA program is primarily dedicated to producing well-trained criminologists, researchers and criminal justice practitioners. The job market for an individual with a master's degree in the field is extremely good. Some graduate students advance their career while completing coursework, while others are hired at the completion of their degree. Graduates of the MA program have obtained positions in the criminal justice system, including criminal or juvenile courts, institutional and community-based agencies, and state and federal police agencies. Careers are also possible in government, planning, public administration, research, teaching or community activism.

**Non-Matriculated Student Policy:** Non-matriculated students are eligible to take some of the graduate courses offered in Criminal Justice. If accepted into the program, up to 9 credits may be applied toward the degree program.

**Financing Opportunities:** Students in the MA program cannot be awarded Teaching Assistantships. Occasionally, however, funded research opportunities become available for which MA students are eligible.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the demands of a graduate program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Criminology/Criminal Justice, Geography, History, Law, Political Science, Social Work, Sociology or a related field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, discuss your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should not be too lengthy (up to 10 pages is preferable) and should be fully referenced according to a professional, scholarly style manual. Although it need not be related directly to Criminal Justice, it should reflect your ability to prepare a social science paper.

**Transfer Credit:** Students with graduate course credits from other accredited institutions should petition the Graduate Chair to determine the acceptance and transferability of coursework. Grades must be of "B" quality or better. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

## Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
CJ 8101	Decision Making in Criminal Justice	3
CJ 8102	Research Methods in Criminal Justice	3
CJ 8106	Theories of Crime and Deviance	3
CJ 8228	Race, Crime, and Justice	3
<b>Electives</b> <sup>1</sup>		<b>12</b>
<b>Research Course</b>		
CJ 9996	Thesis Research	6
<b>Total Credit Hours</b>		<b>30</b>

1

Students must earn 6 credits in Criminal Justice electives. For the remaining 6 elective credits, additional coursework can be taken in Criminal Justice or outside the department.

## Non-Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
CJ 8101	Decision Making in Criminal Justice	3
CJ 8102	Research Methods in Criminal Justice	3
CJ 8106	Theories of Crime and Deviance	3
CJ 8228	Race, Crime, and Justice	3
<b>Electives</b> <sup>1</sup>		<b>18</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Students must earn 9 credits in Criminal Justice electives. For the remaining 9 elective credits, additional coursework can be taken in Criminal Justice or outside the department.

### Culminating Event:

*Thesis:*

For the [Thesis Track](#), the thesis must be based on an original research project.

Note that the [Non-Thesis Track](#) requires only successful completion of coursework.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/criminal-justice-ma-la-cj-ma>

### Department Information:

Dept. of Criminal Justice  
508 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
cjgrads@temple.edu  
215-204-1376

## Submission Address for Application Materials:

<https://apply.temple.edu/CLAV>

## Department Contacts:

*Admissions:*

Joe DelMastro  
cjgrads@temple.edu  
215-204-1376

*Graduate Chairperson:*

Jeffrey Ward, PhD  
jeffrey.ward@temple.edu  
215-204-5267

*Chairperson:*

Jennifer Wood, PhD  
jennifer.wood@temple.edu  
215-204-8055

## Criminal Justice PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Criminal Justice.

## About the Program

The PhD degree program in Criminal Justice is designed to produce criminal justice scholars who will lead the field in academia, private and governmental research agencies, and policy-level positions in criminal justice and related organizations. The PhD degree requires the completion of a minimum of 48 hours of coursework post-baccalaureate, although students may take additional courses to prepare themselves for subsequent stages of their post-graduate career.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Doctoral students are expected to be enrolled full-time. Part-time students are accepted in exceptional circumstances. Students should note that classes are scheduled both during the day and evening as scheduling demands. Students are expected to be available for classes when they are scheduled.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interests in a wide range of fields. Many of the students entering the Criminal Justice PhD program have backgrounds in Counseling, Economics, Geography, History, Political Science, Psychology, Social Work, Sociology, and Urban Studies.

**Ranking:** In the 2021 rankings by *U.S. News & World Report*, Temple University's Criminal Justice program was rated 14th in Criminology. In addition, *The Chronicle of Higher Education's* Faculty Scholarly Productivity Index identifies the faculty of the Criminal Justice department as the sixth most productive among all doctoral programs in Criminology and Criminal Justice.

**Areas of Specialization:** Faculty members specialize and offer substantial coursework in a wide array of areas, including:

- Corrections and community corrections
- Court processes
- Crime and the physical/social environment
- Criminal justice policy making and strategic management
- Criminal law
- Criminological theory
- Discretion in criminal justice
- Issues in policing
- Juvenile justice
- Organized crime
- Qualitative/quantitative research methods
- Restorative justice
- Socialization and deviant behavior
- Statistical analysis
- White collar crime

**Job Prospects:** The PhD program is primarily dedicated to producing well-trained criminologists, researchers and criminal justice practitioners. The job market for an individual with a PhD degree in the field is extremely good. Most of our graduates enter the academy as university professors while others advance their careers in research for government or private agencies.

**Non-Matriculated Student Policy:** Non-matriculated students are eligible to take some of the graduate courses offered in Criminal Justice. If accepted into the program, up to 9 credits may be applied toward the degree program. For some courses, permission of the instructor is required before registration by non-matriculated students can occur.

**Financing Opportunities:** The principal duties of a Teaching Assistant include assisting faculty members in classroom (field, observatory) instruction, conducting tutorials and discussion sections, and grading quizzes. Research Assistants are expected to devote 20 hours per week on average to research obligations. They are assigned to a faculty member or principal investigator investigating a specific research project. The appropriate subjects are determined by consultation between the student and the student's research and academic advisors. Both Teaching and Research Assistantships carry a stipend and full tuition remission for up to 9 credits per term. Applications should include:

1. a statement of previous teaching and/or research experience, areas of interest, and future goals;
2. unofficial transcripts; and
3. a curriculum vitae.

The Department makes assistantship offers in early Spring of each year.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15; November 30 international

Applications are evaluated from the end of October until the deadline. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 3*

*From Whom:* Ideally, the letters should be obtained from college/university faculty members familiar with the applicant's academic competence. Letters from employers and other non-academic assessors are accepted but generally carry far less weight.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Criminology/Criminal Justice, Geography, History, Law, Political Science, Social Work, Sociology or a related field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, discuss your specific interest in Temple's program, research goals and how they relate to Temple's program, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should not be too lengthy (up to 10 pages is preferable) and should be fully referenced according to a professional, scholarly style manual. Although it need not be related directly to Criminal Justice, it should reflect your ability to prepare a social science paper.

**Advanced Standing:** Graduate coursework taken as part of a master's degree program at an accredited institution prior to matriculation at Temple may be accepted for advanced standing credit, provided the coursework is relevant to the PhD in Criminal Justice. To request advanced standing, the applicant must provide an official transcript from their prior graduate institution to the Graduate Chair that clearly states "MA awarded" and the date of its awarding. The Graduate Committee reviews the request.

Only grades of "B" or better are accepted. If the request is granted, the student receives advanced standing and is awarded a maximum of 15 credits. Students with transferred credits should expect that they will have to complete much of the required coursework in residence to ensure that they are adequately prepared to take their PhD comprehensive exams.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 48*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CJ 8101	Decision Making in Criminal Justice	3
CJ 8102	Research Methods in Criminal Justice	3
CJ 8104	Law and Social Order	3
CJ 8105	Statistical Issues and Analysis of Criminal Justice Data	3
CJ 8106	Theories of Crime and Deviance	3
CJ 8228	Race, Crime, and Justice	3
CJ 8302	Advanced Methods and Issues in Criminal Justice Research	3
CJ 8305	Advanced Statistical Issues in Criminal Justice Data	3
<b>Electives <sup>1</sup></b>		<b>18</b>
<b>Research Courses <sup>2</sup></b>		<b>6</b>
CJ 9994	Preliminary Examination Preparation	
CJ 9998	Pre-Dissertation Research	
CJ 9999	Doctoral Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

Any CJ course at the 8000 or 9000 level that is not a required course may be taken as an elective. With approval from their advisor, students may take up to two graduate-level courses outside the department.

2

Of the 6 required research credits, a minimum of 2 credits of CJ 9999 must be taken. The other 4 credits may be taken in any combination of CJ 9994, CJ 9998, and CJ 9999.

### Culminating Events:

#### *Comprehensive Examinations:*

Two comprehensive examinations must be passed. One is in "Justice," which has the Criminal Justice system as its focus. The second is in "Crime," which has theory as its focus. The purpose of the comprehensive exams is to demonstrate critical and interpretive knowledge in specialized areas of both the Criminal Justice system and Criminal Justice theory.

#### *Prospectus Defense:*

The prospectus defense evaluates the student's ability to apply specific research and/or analytic methods to the questions addressed in the prospectus. The defense occurs within several weeks of the student's advisor confirming, in writing to the Graduate Chair, that the student is ready to defend their prospectus.

Ideally, the prospectus defense should be completed within one academic year of the comprehensive examinations. The prospectus defense consists of a short (30-40 minute) presentation of the prospectus by the student to faculty and graduate students. Following the presentation, the Graduate Chair mediates a question-and-answer session between the student and audience. The members of the student's Doctoral Advisory Committee normally pose the initial questions at the defense. When these have been exhausted, other audience members are asked to put forth any questions they have for the student. The defense is scheduled to last no longer than two hours.

The Doctoral Advisory Committee must evaluate the quality of the presentation and of the answers provided during the question-and-

answer session. Committee members look for evidence of a breadth and depth of understanding of specific substantive and methodological areas. In addition, they gauge the student's ability to utilize their knowledge to address the questions posed during the defense. Each member votes to pass or fail the student. Members can also vote to pass pending the completion of specified changes to the prospectus. In order to pass, a majority of the committee members must agree that the defense has been satisfactorily completed.

Students who are preparing to defend their prospectus should arrange some dates and times for the defense with the Doctoral Advisory Committee. The student should then inform the Graduate Chair of these dates and times and confirm the final date and time selected. Finally, the Graduate Chair provides confirmation of the time, date and room.

#### *Dissertation:*

The dissertation is an original empirical study that makes a significant contribution to the field of Criminal Justice. It should expand the existing database and demonstrate the student's knowledge of both research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field of Criminal Justice; demonstrate an understanding of the relationship between the primary area of interest and the broader field of Criminal Justice; and be prepared for publication in a professional journal.

The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Temple Graduate Faculty members. Two members, including the Chair, must be from the Department of Criminal Justice. Committee compositions must be approved by the Department's Graduate Committee. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the Committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least one additional Graduate Faculty member from outside the Department of Criminal Justice. The Outside Examiner should be identified no later than the beginning of the term in which the student will defend the dissertation. The Dissertation Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of a Committee, the new member must be approved by the Department's Graduate Committee and registered with the Graduate Secretary and the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Doctoral Advisory Committee and register with the Graduate Secretary at least 30 days before the defense is to be scheduled. The Graduate Secretary arranges the time, date and room and forwards to the student the appropriate paperwork. After the Graduate Secretary has scheduled the defense, the student must send the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 working days before the defense. The department posts flyers announcing the defense.



## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/criminal-justice-phd-la-cj-phd>

### Department Information:

Dept. of Criminal Justice  
508 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
cjgrad@temple.edu  
215-204-1376

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

#### Admissions:

Joe DelMastro  
delmastro@temple.edu  
215-204-1376

#### Graduate Chairperson:

Jeffrey Ward, PhD  
jeffrey.ward@temple.edu  
215-204-5267

#### Chairperson:

Jennifer Wood, PhD  
jennifer.wood@temple.edu  
215-204-8055

## Decision Neuroscience MS

COLLEGE OF LIBERAL ARTS

### About the Program

This program is *not open for direct admission*. The Master of Science in Decision Neuroscience is awarded to a student enrolled in the Doctor of Philosophy (PhD) program in Decision Neuroscience who successfully completes 30 credits of required coursework but chooses to not continue in the PhD program.

### Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
BA 9813	Problem Solving using Quantitative Research Methods	3
MKTG 9090	Sem-Sel Topics in Mktg <sup>1</sup>	3
PSY 8310	Topical Seminar in Cognitive Psychology (2 courses) <sup>2</sup>	6

Course in decision neuroscience	3
Proseminar in decision neuroscience	3

#### Electives

Select four from the following: 12

#### Methods Electives

BA 9806	Integrative Perspectives on Business Knowledge
BA 9814	Advanced Quantitative Research Methods
BA 9815	Problem Solving using Qualitative Research Methods
PSY 8033	Hierarchical Linear Modeling

#### Other Electives

MKTG 9001	Behavioral Science Seminar
MKTG 9002	Seminar on Behavioral Research in Marketing
MKTG 9003	Sem-Quant Research-Mktg
PSY 8312	Core Course in Cognitive Psychology
PSY 8712	Core Course in Behavioral Neuroscience

**Total Credit Hours** 30

1

The select topic for this course is an introduction to research in judgment and decision-making and their applications.

2

PSY 8310 Topical Seminar in Cognitive Psychology is taken twice for credit. One course topic provides an introduction to the biological bases of higher brain function, including attention, consciousness, emotion, executive functions, language, memory and perception. The other provides an overview of the use of functional magnetic resonance imaging (fMRI) in the investigation of human sensory, motor and cognitive function.

## Decision Neuroscience PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Decision Neuroscience.

### About the Program

The field of decision neuroscience provides new insights into the mechanisms that underlie a wide range of economic and social phenomena, from risky choice and consumer behavior to altruism and cooperation. It is also a primary example of truly interdisciplinary research, with people from such diverse fields as business administration, economics, engineering, neuroscience, philosophy, physics and psychology working together to advance knowledge of mechanisms underlying decision-making and decision preferences.

The interdisciplinary PhD program in Decision Neuroscience in the Department of Psychology and Neuroscience in the College of Liberal Arts is a collaborative effort with the Fox School of Business and Management. Temple University's Department of Psychology and Neuroscience has long been a leader in brain and cognitive science research. Similarly, through the efforts of its Center for Applied Research in Decision Making, Fox School has been at the forefront of the field of decision neuroscience over the past ten years.

Students enrolled in the program gain a thorough understanding of the intellectual issues in the rapidly growing field of decision neuroscience and its subfields of neuroeconomics and neuromarketing. The program has the unique vision of integrating scientific findings with everyday

real-world problems. It is designed for students who want to work at the intersection of neuroscience and business.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** The program is inherently interdisciplinary.

**Ranking:** Over the years, Temple University's Psychology PhD program has been consistently ranked among the very best by all evaluating agencies.

**Job Prospects:** Graduates of the program are prepared to seek tenure-track appointments either in business schools or psychology departments, depending on their approach to the program's curriculum.

**Non-Matriculated Student Policy:** Non-matriculated students are not permitted to take 8000-level Psychology courses.

**Financing Opportunities:** Both Teaching and Research Assistantships carry a stipend, full tuition remission (up to 12 credits per term depending on year and specialization), and health insurance benefits. The principal duties of a Teaching Assistant (TA) include assisting faculty members in classroom (field and observatory) instruction, conducting tutorials and discussion sections, and grading quizzes. A Research Assistant (RA) is expected to devote 20 hours per week on average to research obligations. An RA is assigned to a faculty member or principal investigator who is working on a specific research project. The appropriate subjects are determined by consultation between the student and the student's research and academic advisors.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 1

Applications are not evaluated until after the deadline has passed.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 500 to 1,000 words, state your interest in Temple's program, your research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the

exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0
- PTE Academic: 72

**Resume:** Current resume required.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 42

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BA 9813	Problem Solving using Quantitative Research Methods	3
MKTG 9090	Sem-Sel Topics in Mktg <sup>1</sup>	3
PSY 8310	Topical Seminar in Cognitive Psychology (2 courses) <sup>2</sup>	6
	Course in decision neuroscience	3
	Proseminar in decision neuroscience	3
<b>Methods Electives</b>		
	Select two from the following:	6
BA 9806	Integrative Perspectives on Business Knowledge	
BA 9814	Advanced Quantitative Research Methods	
BA 9815	Problem Solving using Qualitative Research Methods	
PSY 8033	Hierarchical Linear Modeling	
<b>Other Electives</b>		
	Select four from the following:	12
MKTG 9001	Behavioral Science Seminar	
MKTG 9002	Seminar on Behavioral Research in Marketing	
MKTG 9003	Sem-Quant Research-Mktg	
PSY 8310	Topical Seminar in Cognitive Psychology	
PSY 8312	Core Course in Cognitive Psychology	
PSY 8712	Core Course in Behavioral Neuroscience	
<b>Research Courses</b>		
PSY 9994	Preliminary Examination Preparation	1
PSY 9998	Pre-Dissertation Research	2
PSY 9999	Ph.D. Dissertation Research	3
<b>Total Credit Hours</b>		<b>42</b>

1

The select topic for this course is an introduction to research in judgment and decision-making and their applications.

2

PSY 8310 Topical Seminar in Cognitive Psychology is taken twice for credit. One course topic provides an introduction to the biological bases of higher brain function, including attention, consciousness, emotion, executive functions, language, memory and perception. The other provides an overview of the use of functional magnetic resonance imaging (fMRI) in the investigation of human sensory, motor and cognitive function.

#### **Additional Requirements:**

##### *Research Rotations:*

In addition to undertaking specially designed interdisciplinary coursework, students complete research rotations during the first year of study that prepare them for independent research in the field of decision neuroscience. Students are required to complete two laboratory rotations in their first year (Fall and Spring) that would ideally be in different subfields with different mentors. Students also have the option to complete a third rotation during the Summer if they require additional exposure.

Research rotations are designed to give students a wide range of knowledge in the area of decision neuroscience by being engaged in the research of an assigned lab. When rotating through a lab (or with a research mentor), students are often paired with a senior lab member (e.g., a postdoctoral fellow or senior graduate student) to work on an ongoing research project. In some cases, they may be given a new project based on their knowledge and skill levels. Students are not, however, expected to complete a full project within an academic term.

##### *Research Meetings:*

Students are expected to attend research meetings and to be fully engaged in the research culture.

##### *Publications:*

It is expected that students will write, submit and publish articles.

##### *Grant Proposals:*

Students are expected to prepare a grant proposal for submission to a government funding agency. Eligible students are also required to write and submit a National Research Service Award (NRSA) proposal at the end of their third year. International students who are not eligible for federal grants are encouraged to work on submissions with faculty members.

#### **Culminating Events:**

##### *Comprehensive Examination:*

The comprehensive examination is taken at the end of the second year of study. Each student must propose and defend a major area paper in their proposed field of research. Upon passing the exam, students choose a faculty member from either the College of Liberal Arts or Fox School as their primary mentor.

##### *Dissertation:*

The doctoral dissertation is an original empirical study that makes a significant contribution to the field. It should expand the existing knowledge and demonstrate the student's grasp of research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of psychology; and be prepared for publication in a professional journal.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee consists of the Doctoral Advisory Committee plus at least three additional doctorally prepared individuals. The majority of the individuals on the Committee must be members of the Temple University Graduate Faculty. The Dissertation Examining Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of either the Doctoral Advisory Committee or Dissertation Examining Committee, the new member must be approved by the Departmental Chair and registered with the department's Graduate Secretary and the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Secretary at least 15 days before the defense is to be scheduled. The Graduate Secretary arranges the time, date and room within two working days, and forwards to the student the appropriate forms.

After the Graduate Secretary has scheduled the defense, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 working days before the defense. The Department posts announcements of the defense, and the Graduate School lists the defense on its website.

## **Contacts**

### **Department Web Address:**

<https://www.temple.edu/academics/degree-programs/decision-neuroscience-phd-la-dns-phd>

### **Department Information:**

Dept. of Psychology and Neuroscience  
659 Weiss Hall  
1701 N. 13th Street  
Philadelphia, PA 19122-6085  
deborah.drabick@temple.edu  
215-204-7321

### **Submission Address for Application Materials:**

<https://apply.temple.edu/CLAV>

### **Department Contacts:**

#### *Director of Graduate Studies:*

Dr. Deborah Drabick  
deborah.drabick@temple.edu  
215-204-0957

#### *Chairperson:*

Dr. Peter Marshall  
peter.marshall@temple.edu  
215-204-7360

## Economics MA

COLLEGE OF LIBERAL ARTS

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Economics PhD

COLLEGE OF LIBERAL ARTS

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## English MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in English.

### About the Program

The English program enjoys a high reputation for education and research in both traditional and innovative areas of literary history and literary criticism. The graduate program prides itself on providing students with the advantages of studying at a Research I institution in a diverse urban environment.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** In order to be certified as full-time, a student must engage in at least 9 credits of coursework each term or the equivalent in supervised teaching, dissertation research or writing. In special circumstances, the department permits part-time enrollment, but such students are not exempt from the guidelines concerning reasonable academic progress toward the degree.

**Interdisciplinary Study:** Students take courses in all areas of literary studies and are encouraged to develop their interests in related areas, such as History, Philosophy, Psychology, the arts and non-print media.

**Affiliation(s):** Affiliations include the Association of Departments of English (ADE) and the Modern Language Association (MLA).

**Areas of Specialization:** The literature faculty specializes in both emerging and traditional areas of literary scholarship. The MA program provides options for intensive study in critical theory, cultural theory, digital humanities, interdisciplinary methods, minority literature and women's studies. Traditional areas of study include Medieval, Renaissance, eighteenth-century, nineteenth-century, modern and contemporary literature, as well as rhetoric and composition.

**Job Prospects:** Graduates find jobs in the Philadelphia area and in all parts of the United States as teachers, editors and journalists, and in all professions that value writing and critical thinking.

**Non-Matriculated Student Policy:** In general, English graduate courses are open only to students who are matriculated in an English graduate degree program. However, students matriculated in another graduate

program at Temple University may be admitted to English courses at the discretion of the instructor. In exceptional cases, a non-matriculated student may request permission from the instructor to register for a course. All non-matriculated students or students in other University graduate programs should first contact the Graduate Director, who will advise on registering.

**Financing Opportunities:** Assistantship monies are typically reserved for doctoral students.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* February 15

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic abilities.

**Coursework Required for Admission Consideration:** An applicant should hold an undergraduate degree in English or have completed equivalent coursework in English and American literature.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required in a Humanities discipline. A wide range of literature courses should have been taken.

**Statement of Goals:** In approximately 600 to 1,000 words, share your research interests, completed coursework that has especially interested you, and the relevance of the MA to your future goals.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

GRE Subject Test in Literature: Optional. Scores should be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0
- PTE Academic: 72

**Resume:** Current CV or resume required.

**Writing Sample:** The writing sample should be a work of literary criticism, not creative writing, approximately 12 to 15 pages in length. It should represent the best of its author's critical and writing abilities.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
Coursework, including at least one advanced-level (8000 to 9000-level) seminar		27
ENG 9996	Master's Essay	3
<b>Total Credit Hours</b>		<b>30</b>

**Language Requirement:** Students must demonstrate a reading knowledge of one foreign language. Additional information on the variety of ways students can fulfill this requirement can be found in the Graduate English Office.

#### **Culminating Events:**

##### *Qualifying Paper:*

While enrolled in ENG 9996, students must write a qualifying paper that demonstrates the student's ability to write clearly and analytically on a literary subject. Typically a substantial revision of a paper submitted for a previous course, the qualifying paper (4,000-6,000 words) is to be submitted in the last term of coursework. Students work with a Graduate Faculty sponsor who must approve it for submission to the Graduate Director. The paper must then be approved by the MA Qualifying Paper Committee, which may accept the essay or ask for revisions.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/english-ma-la-eng-ma>

### **Department Information:**

Dept. of English  
1027 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
tara.lemma@temple.edu  
215-204-1796

### **Submission Address for Application Materials:**

<https://apply.temple.edu/CLA/>

### **Department Contacts:**

#### *Admissions:*

Tara Lemma  
Graduate Coordinator  
tara.lemma@temple.edu  
215-204-1796

#### *Director of Graduate Studies:*

Steve Newman, PhD  
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215-204-7561

#### *Chairperson:*

Roland Williams, PhD  
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215-204-1756

# **English PhD**

## **COLLEGE OF LIBERAL ARTS**

Learn more about the Doctor of Philosophy in English.

## **About the Program**

The English program enjoys a high reputation for education and research in both traditional and innovative areas of literary history and literary criticism. The graduate program prides itself on providing students with the advantages of studying at a Research I institution in a diverse urban environment. Temple University is the only public university in the Philadelphia area offering a doctoral concentration in rhetoric and composition.

The English doctoral program offers a curriculum that provides training in broad foundational areas while also allowing for concentration in more specialized seminars and in areas of individual student interest. Five-year funding packages are awarded to incoming students, and it is possible for both MA and BA students to complete the degree within that time.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** In order to be certified as full-time, a student must engage in at least 9 credits of coursework each term or the equivalent in supervised teaching, dissertation research or writing. In special circumstances, the department permits part-time enrollment, but no student is exempt from the guidelines concerning reasonable academic progress toward the degree.

**Interdisciplinary Study:** Students are encouraged to engage in serious interdisciplinary projects and to work closely with a faculty member engaged in research and publications projects that take them regularly into the areas of History, Philosophy, Psychology, the arts and non-print media.

**Affiliation(s):** Affiliations include the Association of Departments of English (ADE) and the Modern Language Association (MLA).

**Areas of Specialization:** The literature faculty is productive in both emerging and traditional areas of literary scholarship. The doctoral program provides options for intensive study in British, American and Global Literatures, encompassing critical theory, cultural theory, film theory, interdisciplinary methods, minority literatures, gender studies, and rhetoric and communication. Specialty certificates may be pursued in Gender, Sexuality and Women's Studies, in Cultural Analytics (using digital techniques) and in other areas.

**Job Prospects:** About 40% of graduates hold tenure-track positions at colleges and universities. A smaller number are non-tenure-track faculty, while some work in publishing, foundations or corporate positions. Graduates have traditionally found placement in the Northeast. Increasingly, however, the program's graduates have taken jobs outside the region in Midwestern, Southern and Western states.

**Non-Matriculated Student Policy:** In general, English graduate courses are open only to students who are matriculated in an English graduate degree program. However, students matriculated in another graduate program at Temple University may be admitted to English courses at the discretion of the instructor. In exceptional cases, a non-matriculated student may request permission from the instructor to register for a

course. All non-matriculated students or students in other University graduate programs should first contact the Graduate Director, who will advise on registering.

**Financing Opportunities:** All applicants are automatically considered for funding in the form of a Teaching Assistantship, which consists of five years of support that includes a living stipend, tuition waiver, healthcare and other benefits. Conditions of the award are determined by the graduate student union contract with Temple University, which currently requires recipients to perform a combination of teaching and other assignments. For funding consideration, applications should be submitted by December 15. The department makes funding offers generally in February and March. Students may be admitted to the program without funding and are then placed on a waiting list for funding.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

To be considered for a fellowship and/or teaching assistantship, applicants should submit a complete application by December 15. Applications are accepted until February 15, although funding consideration is uncertain for later applications.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic abilities.

**Coursework Required for Admission Consideration:** The applicant should have completed an undergraduate concentration in English covering a broad chronological range.

**Master's Degree in Discipline/Related Discipline:** A master's degree is preferred.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in English is required.

**Statement of Goals:** In approximately 600 to 1,000 words, share your research goals, particular interest in the Temple English graduate program, and future goals.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

GRE Subject Test in Literature: Optional. Scores should be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0
- PTE Academic: 72

**Resume:** Current CV required.

**Writing Sample:** The writing sample should be a literary critical essay, not a piece of creative writing, approximately 12 to 15 pages in length. It should represent the student's best work, and it may or may not relate to the student's future graduate studies.

**Advanced Standing:** Students who have earned graduate credits or a master's degree in English from another institution can transfer up to 15 credits (five courses) toward the coursework requirement for the PhD.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 48

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
ENG 5001	Introduction to Graduate Study in English	3
ENG 5502	Current Directions in Critical Theory	3
ENG 8900	Advanced Study in Literature and Culture <sup>1</sup>	3
<b>5000-level Courses</b>		
Select two from the following:		6
ENG 5011	Early British Literature	
ENG 5012	Early American Literature	
ENG 5014	16th and 17th Century British Literature	
ENG 5016	18th Century British Literature	
ENG 5018	19th Century British Literature	
ENG 5021	19th Century American Literature	
ENG 5022	20th and 21st Century British Literature	
ENG 5024	20th and 21st Century American Literature	
ENG 5026	Anglophone Literatures	
ENG 5501	History of Critical Theory	
ENG 5720	Topics - Rhetoric and Composition	
<b>8000-level Advanced Seminars <sup>2</sup></b>		<b>6</b>
<b>Electives <sup>3</sup></b>		<b>21</b>
<b>Research Courses</b>		<b>6</b>
ENG 9994	Preliminary Examination Preparation	
ENG 9998	Pre-Dissertation Research	
ENG 9999	Dissertation Research <sup>4</sup>	
<b>Total Credit Hours</b>		<b>48</b>

<sup>1</sup>

ENG 8900 is taken by students in their last term of coursework, after they have satisfied all 5000- and 8000-level course requirements.

<sup>2</sup>

Students select two advanced seminars at the 8000 level, with the exception of ENG 8900 Advanced Study in Literature and Culture and ENG 8985 Teaching in Higher Education: Writing.

<sup>3</sup>

Students select seven electives in consultation with the Graduate Director.

4

At least 2 of the 6 credits must be in ENG 9999 Dissertation Research.

**Language Requirement:** Students must demonstrate a reading knowledge of one foreign language. For doctoral students, the language requirement must be satisfied before taking the first preliminary examination. No exceptions to this rule are permitted. Additional information on fulfilling this requirement can be found in the Graduate English Office.

#### **Culminating Events:**

##### *Optional Master's Degree:*

Students enrolled in the PhD program who do not already possess the MA degree may acquire the optional MA degree while continuing on to the PhD. Students who leave the PhD program for any reason also can apply for the MA degree. In either case, the student qualifies for the MA by successfully completing 30 credits of coursework; passing the foreign language requirement; and writing a Qualifying Paper that demonstrates the student's ability to write perceptively, lucidly, and at length (4,000-6,000 words) on a literary subject.

##### *Preliminary Examination:*

The preliminary examination should demonstrate competence in two areas. Typically, one area corresponds to a general teaching area (e.g., British 19th Century, American 20th Century), while the other represents the student's scholarly research interests (e.g., Ecocriticism, Ethnic Literature, Gender Studies, Literature and Visual Arts). Students define these areas by writing a protocol and constructing two reading lists, one for each area. The protocol is an explanation and justification of the two reading lists in terms of professional aims.

In preparing for the exam, students in their final term of coursework register for ENG 8900 Advanced Study in Literature and Culture. In addition, they typically register for ENG 9082 Independent Study or ENG 9994 Preliminary Examination Preparation. During the following term, with all coursework completed, students take the exam itself. The exam consists of three parts:

- Part I is a course syllabus for each area of the exam. It is submitted by the student in advance of the exam.
- Part II constitutes written answers to questions in each area, which are prepared over the course of three days and may be written at home or in a place of the student's choice.
- Part III is an oral examination that is taken only after passing Part II. The oral exam is conducted on campus, no more than three weeks after the written exam.

Exams are judged "Pass," "Fail" or "Honors." Additional details on exam procedures and the criteria for passing are available from the Graduate English Office.

##### *Dissertation Proposal:*

The dissertation proposal should:

- identify the key issues to be investigated;
- demonstrate an awareness of the relevant scholarship in the field; and
- provide a detailed outline of the proposed dissertation.

##### *Dissertation:*

The dissertation should demonstrate the student's ability to conceive, research and write a scholarly project of at least 150 pages. The student's doctoral research is overseen by the Doctoral Advisory

Committee, which consists of at least three Graduate Faculty members. Two members, including the Chair, must be from the English Department. Committee compositions must be approved by the department's graduate committee. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. This committee comprises the Doctoral Advisory Committee and at least one additional Graduate Faculty member from outside the English Department. The Outside Examiner should be identified no later than the beginning of the term in which the student will defend the dissertation. The committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student wishes to change a member of a committee, the new member must be approved by the department's graduate executive committee and registered with the Graduate Coordinator and the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Coordinator at least 15 days before the defense is to be scheduled. The Graduate Coordinator arranges the time, date and room. After the Graduate Coordinator has made the arrangements, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 working days before the defense. The department posts notices announcing the defense.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/english-phd-la-eng-phd>

### **Department Information:**

Dept. of English  
1027 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
tara.lemma@temple.edu  
215-204-1796

### **Submission Address for Application Materials:**

<https://apply.temple.edu/CLA/>

### **Department Contacts:**

#### *Admissions:*

Tara Lemma  
Graduate Coordinator  
tara.lemma@temple.edu  
215-204-1796

#### *Director of Graduate Studies:*

Steve Newman, PhD  
snewman@temple.edu

215-204-7561

*Chairperson:*

Roland Williams, PhD

roland.williams@temple.edu

215-204-1756

## Geographic Information Systems PSM

COLLEGE OF LIBERAL ARTS

Learn more about the Professional Science Master's in Geographic Information Systems.

### About the Program

The Professional Science Master's (PSM) degree in Geographic Information Systems (GIS) combines advanced training in GIS core skills with professional development and business ethics to prepare students to enter the GIS workforce. Our courses introduce students to a variety of cutting-edge spatial analysis technology and mapping software. The Department of Geography and Urban Studies faculty have expertise in a range of GIS applications, including business, environment, geovisualization, health, location analysis, remote sensing and urban. The program curriculum is informed by an advisory board of industry professionals and incorporates real-world experiences through project-based learning and an internship capstone requirement. Graduates are well prepared to pursue certification as a GIS professional (GISP).

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis. Full-time students can complete the program in one calendar year. Part-time students are expected to complete the program in 3 years.

**Affiliation(s):** The program is an affiliated Professional Science Master's program.

**Areas of Specialization:** The program specializes in Geographic Information Systems and offers coursework in cartography, geospatial programming, geovisualization, spatial database design, spatial statistics, web mapping, and several applied areas. The Department offers students the opportunity to learn in research laboratory settings equipped with the latest technologies.

**Job Prospects:** The program trains a workforce that is highly competent to meet the challenges faced by public, regulated and private sector industries and also adaptable to the future needs of the industries. It provides access to a professional career, requiring both technical skills and professional development training in areas related to business, ethics and policy. The program enables students to match their specialized training in GIS with substantive fields that utilize such training, including criminology, epidemiology, national security, natural and environmental sciences, and urban and regional planning.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits prior to matriculation. If accepted into the program, these credits may be applied toward the degree.

**Funding Opportunities:** Typically, the Department does not provide financial assistance to students at the master's level. Teaching and Research Assistantships are reserved for PhD students.

### Admission Requirements and Deadlines

#### Application Deadline:

##### Fall:

- March 1 – Application Deadline
- July 1 – Late Application Deadline

##### Spring:

- November 1 – Application Deadline
- December 7 – Late Application Deadline

##### Summer:

- April 15 – Application Deadline

Applications are processed as they are received. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

#### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members or professional references familiar with the applicant's academic competence. The recommendations may be submitted on the "Reference Report for Graduate Study" or as a traditional letter of recommendation. Letters must be signed and forwarded as a PDF on official letterhead.

**Coursework Required for Admission Consideration:** No specific coursework is required as applicants are drawn from a variety of disciplines.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in any field is appropriate. An undergraduate GPA of 3.0 or an undergraduate GPA of 2.5 with 2 to 4 years of relevant professional experience is preferred.

**Statement of Goals:** In approximately 500 to 1,000 words, share why you are interested in this program, your research and academic goals, future career goals, academic and research achievements, and any other information that you believe will be helpful in evaluating your application.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- PTE Academic: 60

**Resume:** Current resume required.

**Transfer Credit:** Applicable graduate coursework may be transferred from outside the University, provided that the credits were obtained



no more than five years prior to the student's matriculation at Temple and the grades are "B" or better. The credits must be equivalent to coursework offered at Temple. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
GUS 5031	GIS Programming	3
GUS 5162	Advanced Statistics for Urban Applications	3
GUS 8065	Cartographic Design	3
GUS 8067	Spatial Database Design	3
GUS 8069	GIS Ethics and Professional Practice	3
<b>Electives<sup>1</sup></b>		<b>12</b>
<b>Capstone Course</b>		
GUS 9187	GIS Capstone	3
<b>Total Credit Hours</b>		<b>30</b>

1

In consultation with the faculty advisor, students select four electives from a wide array of courses in cartography, GIS, remote sensing, and spatial analysis. It is recommended that students who are interested in advanced programming take GUS 8066 Application Development for Geographic Information Systems as one of their four electives.

### Culminating Event:

*GIS Capstone:*

The GIS Capstone course (GUS 9187) provides an experiential and industry-relevant learning experience for students matriculated in the GIS Professional Science Master's program at Temple. Students engage in a structured internship experience (140 hours during the term) identified with the guidance of PSM faculty at Temple and a prospective employer. The student completes a GIS-oriented project during the internship that draws on the GIS science and professional skills developed through the PSM curriculum.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/geographic-information-systems-psm-la-gis-psm>

### Department Information:

Dept. of Geography and Urban Studies  
308 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
psmgis@temple.edu  
215-204-7692

## Submission Address for Application Materials:

<https://apply.temple.edu/CLAV>

## Department Contacts:

*Senior Manager, Administration:*

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215-204-7757

*Program Coordinator:*

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*Assistant Director:*

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*Graduate Chairperson:*

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215-204-7692

*Chairperson:*

Melissa Gilbert, PhD  
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215-204-7692

## Geography MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Geography.

## About the Program

The Master of Arts program in Geography focuses on geographic approaches to the study of urban and environmental processes and conditions in U.S. and international settings. Our emphasis is on the themes of geographic methods, globalization, social justice and sustainability. We train our students to conduct research that is theoretically informed and empirically grounded along the urban to rural continuum; understand interdisciplinary and integrative analyses of complex human-environmental processes; and specialize in techniques for urban and environmental analysis with an emphasis on GIS, spatial statistics and qualitative methods.

The program prepares students for further study and for careers in academia, business, government, nonprofit organizations, and community organizing and social change efforts, such as economic development, environmental management, geographic systems management, and planning and public policy. Throughout, emphasis is placed on the development of research techniques and analytical skills applicable to problem solving.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Faculty members in the Department of Geography and Urban Studies hold doctoral degrees in environmental science, geography, urban and regional planning, and other social sciences. Even beyond the interdisciplinary expertise of the departmental faculty, the program draws on the expertise of Graduate Faculty conducting research and teaching courses in related departments across the university.

**Affiliation(s):** The program is affiliated with the Association of American Geographers and the Urban Affairs Association.

**Areas of Specialization:** Graduate faculty expertise is at the intersection of geographic methods, globalization, social justice and sustainability, including Black and feminist geographies, community-based research, energy geography, geographic information science, geospatial data science, health geography, political ecology, sustainability science, urban analytics, urban and economic geography, and urban studies and public policy. Faculty have regional expertise in North America, Latin America, East and Southeast Asia, and Africa. Faculty networks with academic institutions, community organizations, nongovernmental organizations and public agencies, as well as social movements in Philadelphia and beyond, provide opportunities to actively engage in research.

**Job Prospects:** Graduates have continued their education by pursuing doctoral degrees in some of the nation's most prestigious PhD programs. Graduates also find employment in public sector agencies that deal with environmental planning, land use and urban problems. In addition, they work for quasi-public social service institutions that address various needs of urban residents, as well as for private sector firms whose business requires an understanding of urban and spatial dynamics.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits prior to matriculation. If accepted into the program, these credits may be applied toward the degree.

**Funding Opportunities:** Typically, the Department does not provide financial assistance to students at the master's level. Teaching and Research Assistantships are reserved for PhD students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications may be reviewed prior to the deadlines. Although students are sometimes admitted for the Spring term, the Department encourages applicants to apply for the Fall term since the program sequence is designed to begin at that time.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence. The recommendations may be submitted on the "Reference

Report for Graduate Study" or as a traditional letter of recommendation. Letters must be signed and forwarded as a PDF on official letterhead.

**Coursework Required for Admission Consideration:** No specific coursework is required as applicants are drawn from a variety of disciplines.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in any of the social sciences is appropriate. A bachelor's degree in another discipline may also be considered.

**Statement of Goals:** In approximately 500 to 1,000 words, share why you are interested in Temple's Geography program, your research and academic goals, future career goals, academic and research achievements, and any other information that you believe will be helpful in evaluating your application. The Graduate Admissions Committee is particularly interested in students' interests and goals and whether they fit with our program offerings and faculty interests.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- PTE Academic: 60

**Resume:** Current resume required.

**Writing Sample:** At its discretion, the Graduate Admissions Committee may request a writing sample.

**Transfer Credit:** Applicable graduate coursework may be transferred from outside the University, provided that the credits were obtained no more than five years prior to the student's matriculation at Temple and the grades are "B" or better. The credits must be equivalent to coursework offered at Temple. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
GUS 5159	Geographic Inquiry	3
Select one from the following:		3
GUS 5041	Sustainable Natural-Human Systems	
GUS 8016	Public Policy for Urban Regions	
Select one from the following:		3
GUS 5031	GIS Programming	
GUS 5032	Geosimulation	
GUS 5062	Fundamentals of Geographical Information Systems	

GUS 5063	Remote Sensing	
GUS 5065	Urban Geographical Information Systems	
GUS 5066	Environmental Applications of GIS	
GUS 5067	GIS and Location Analysis	
GUS 5068	Census Analysis with Geographical Information Systems	
GUS 5069	GIS for Health Data Analysis	
GUS 5072	Advanced Remote Sensing	
GUS 5161	Statistics for Urban Spatial Analysis	
<b>Methodology Courses</b> <sup>1</sup>		<b>6</b>
<b>Electives</b> <sup>2</sup>		<b>12</b>
<b>Capstone Course</b>		
GUS 8097	Research Design <sup>3</sup>	3
	or GUS 9085 Internship in Geography and Urban Studies	
<b>Total Credit Hours</b>		<b>30</b>

1

Students select two courses from a departmental list of approved methodology courses.

2

Any GUS course at the 5000 level or higher may be taken as an elective. With approval from their advisor and the graduate chair, students may take graduate-level courses outside the department.

3

Master's students must have permission from the chair to enroll in GUS 8097.

#### **Culminating Event:**

##### *Capstone Course:*

Students must complete either an internship or GUS 8097 Research Design.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/geography-and-urban-studies-ma-la-gus-ma>

### Department Information:

Dept. of Geography and Urban Studies  
308 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
guses@temple.edu  
215-204-7692

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

#### *Senior Manager, Administration:*

Jessica Brennan  
jessica.brennan@temple.edu  
215-204-7757

#### *Graduate Chairperson:*

Kimberley Thomas, PhD  
kimthomas@temple.edu  
215-204-7692

#### *Chairperson:*

Kevin Henry, PhD  
khenry1@temple.edu  
215-204-7692

## Geography PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Geography.

### About the Program

The doctoral program in Geography focuses on geographic approaches to the study of urban and environmental processes and conditions in U.S. and international settings. Our emphasis is on the themes of geographic methods, globalization, social justice and sustainability. We train our students to conduct research that is theoretically informed and empirically grounded along the urban to rural continuum; understand interdisciplinary and integrative analyses of complex human-environmental processes; and specialize in techniques for urban and environmental analysis with an emphasis on GIS, spatial statistics and qualitative methods.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Faculty members in the Department of Geography and Urban Studies hold doctoral degrees in environmental science, geography, urban and regional planning, and other social sciences. Even beyond the interdisciplinary expertise of the departmental faculty, the program draws on the expertise of Graduate Faculty conducting research and teaching courses in related departments across the university.

**Affiliation(s):** The program is affiliated with the Association of American Geographers and the Urban Affairs Association.

**Areas of Specialization:** Graduate faculty expertise is at the intersection of geographic methods, globalization, social justice and sustainability, including Black and feminist geographies, community-based research, energy geography, geographic information science, geospatial data science, health geography, political ecology, sustainability science, urban analytics, urban and economic geography, and urban studies and public policy. Faculty have regional expertise in North America, Latin America, East and Southeast Asia, and Africa. Faculty networks with academic institutions, community organizations, nongovernmental organizations and public agencies, as well as social movements in Philadelphia and beyond, provide opportunities to actively engage in research.

**Job Prospects:** Graduates are often employed in academic settings as teaching-research scholars in geography and in interdisciplinary fields such as environmental studies, international studies and urban studies. They also serve research-oriented organizations such as non-governmental organizations, policy institutes and think tanks as applied researchers and administrators.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits prior to matriculation. If accepted into the program, these credits may be applied toward the degree.

**Funding Opportunities:** Financial support is available to graduate students through a variety of university and departmental teaching and research assistantships, fellowships, and awards. Most assistantships and fellowships carry a stipend plus a tuition waiver. Assistantships typically require 20 hours of work per week devoted to assisting faculty with either teaching or research. Teaching Assistants grade papers, lead discussion sections, and occasionally lecture in large undergraduate classes. Advanced graduate students are sometimes assigned their own undergraduate class to teach.

In recent years, a number of graduate students have been supported by externally funded faculty research projects. Positions on funded research projects may include full or partial tuition coverage in addition to the stipend for up to 20 hours of work per week. The timing and availability of such opportunities depend on the status of faculty research projects and external grants.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15

Applications may be evaluated before the deadline, if submitted early, and after the deadline at the discretion of the Graduate Chair.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence. The recommendations may be submitted on the "Reference Report for Graduate Study" or as a traditional letter of recommendation. Letters must be signed and uploaded as a PDF on official letterhead.

**Coursework Required for Admission Consideration:** No specific coursework is required as applicants are drawn from a variety of disciplines.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required but is highly recommended.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. It should have been earned in Geography, Urban Studies, Anthropology, Criminal Justice, Economics, Political Science, Psychology or Sociology, among other disciplines.

**Statement of Goals:** In approximately 500 to 1,000 words, share why you are interested in Temple's Geography program, your research and academic goals, future career goals, academic and research achievements, and any other information that you believe will be helpful in evaluating your application. The Graduate Admissions Committee is particularly interested in students' interests and goals and whether they fit with the interests of specific faculty as well as general program offerings.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the

exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- PTE Academic: 60

**Resume:** Current resume required.

**Writing Sample:** At its discretion, the Graduate Admissions Committee may request a writing sample. The writing sample is not required.

**Advanced Standing:** Graduate coursework taken at an accredited institution as part of a master's degree program prior to matriculation at Temple may be accepted for Advanced Standing Credit. Applicants must supply an official transcript from their prior graduate institution to the Graduate Chair. The Graduate Admissions Committee reviews the request. Only grades of "B" or better can be accepted. If the request is granted, the student receives advanced standing and is awarded a maximum of 24 credits. Normally, these credits should have been earned no more than five years prior to the student's matriculation at Temple.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 57

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
GUS 5159	Geographic Inquiry	3
GUS 8097	Research Design	3
<b>Methodology Courses</b> <sup>1</sup>		<b>6</b>
<b>Electives</b> <sup>2</sup>		<b>39</b>
<b>Research Courses</b> <sup>3</sup>		<b>6</b>
GUS 9994	Doctoral Qualifying Examination	
GUS 9998	Dissertation Proposal	
GUS 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>57</b>

1

Students select two courses from a departmental list of approved methodology courses.

2

Any GUS course at the 5000 level or higher may be taken as an elective. With approval from their advisor and the graduate chair, students may take graduate-level courses outside the department.

3

Of the 6 required research credits, a minimum of 2 credits of GUS 9999 must be taken. The other 4 credits may be taken in any combination of GUS 9994, GUS 9998, and GUS 9999.

### Culminating Events:

*Qualifying Examination:*

The qualifying exam is taken after all coursework is completed. The exam has written and oral components. Students develop the parameters of the exam with their committee, which approves reading lists prepared by the student before the exam. All parts of the written exam must be passed

before the student proceeds to the oral exam. The oral exam, based on the written portion, assesses the candidate's readiness to commence dissertation research.

In conjunction with their Graduate Advisor, each student identifies at least two other faculty members for the exam committee. At least two committee members must be GUS faculty, while the third may be from outside the Department. The Graduate Advisor/Chair and all but one of the remaining members of the examination committee must approve in order for the student to pass.

Students are expected to demonstrate breadth of knowledge and intellectual sophistication across the field of Geography. Students should be able to employ various theoretical approaches to investigate geographic and urban patterns and processes and to use data to illuminate concepts. When student pass the exam (1 credit), they achieve candidacy. If the student fails the exam, they are given the opportunity to retake the exam, usually within one term. If the student fails the second time, they are recommended for academic dismissal.

Ordinarily, the exam should be administered no later than six months after coursework is completed. Several different written formats are possible, at the discretion of the committee, including a single extended paper, individual papers prepared for separate examiners, and closed or open book exams administered within a time limit. The oral portion of the exam may expand on the questions asked on the written exam. It may include additional but related questions.

*Proposal:*

The proposal defines the research problem, scholarly significance, pertinent literature and methodology. It should contain an outline of the projected document and timeline for completing various tasks involved in the dissertation. Within one term after finishing the qualifying exam, a candidate is expected to submit a 5 to 6 page preliminary dissertation proposal to the Doctoral Advisory Committee. Within one year of passing the qualifying exam, a candidate is expected to submit a more substantial proposal to the committee members. When the proposal is ready, the committee chair schedules a meeting of the committee. The student gives an oral presentation of the proposal, and the committee members ask questions and give suggestions. The committee must approve the proposal and give specific instructions on how the student can improve it. After the meeting, the committee chair sends a letter to the Department's Graduate Director indicating whether it has been accepted (1 credit) or rejected, summarizing comments from the overall committee. At that time, the student is scheduled to present their proposal at a departmental colloquium.

*Dissertation:*

The PhD dissertation should make an original contribution to the field of Geography. The dissertation must demonstrate formulation, design and independent execution of a significant research project. The student must complete a minimum of 4 credits of dissertation research. While no ceiling on the number of dissertation credits exists, students should note that seven years from matriculation is the time limit for completion of the degree.

When the student and the committee chair judge the dissertation complete and ready to be defended, the committee chair schedules the defense. The Coordinator arranges the time, date and room, and forwards to the student the appropriate forms. With approval of the committee chair, the Coordinator sends a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," to the Graduate School at least 10 working

days before the defense. The Coordinator notifies all members of the Dissertation Examining Committee and all faculty members and graduate students in the Department. Changes in the membership of a committee must be approved by the Department's Graduate Director. If approved, the Graduate School must be notified.

The entire Dissertation Examining Committee must attend the defense to evaluate the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least one additional Graduate Faculty member from outside the Department of Geography and Urban Studies. Affiliated faculty may serve as external members of the Dissertation Examining Committee. The student presents a formal lecture at the defense. The oral defense should demonstrate that the student's work satisfies the standards for original research in Geography; that the candidate has mastered the appropriate methodology or methodologies; and that the candidate has an understanding of the relationship of the dissertation to the broader field. Following the public lecture and discussion, the Dissertation Examining Committee convenes in a closed session with the candidate for the defense. Directly after this session, the committee votes whether to accept or reject a completed dissertation.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/geography-and-urban-studies-phd-la-gus-phd>

### Department Information:

Dept. of Geography and Urban Studies  
308 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
guses@temple.edu  
215-204-7692

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Senior Manager, Administration:*  
Jessica Brennan  
jessica.brennan@temple.edu  
215-204-7757

*Graduate Chairperson:*  
Kimberley Thomas, PhD  
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215-204-7692

*Chairperson:*  
Kevin Henry, PhD  
khenry1@temple.edu  
215-204-7692

## Geospatial Data Science PSM

COLLEGE OF LIBERAL ARTS

Learn more about the Professional Science Master's in Geospatial Data Science.

## About the Program

Geospatial analysis is a growing expertise with applications for a wide variety of fields and industries, including climate adaptation, retail and business location, spatial epidemiology, urban and environmental planning, and any other discipline in which spatially referenced data informs prediction and decision-making. The Department of Geography and Urban Studies offers graduate work leading to the Professional Science Master's (PSM) degree in Geospatial Data Science. The program combines advanced training in data science and GIS core skills with professional development and business ethics to prepare students to enter the workforce. Our courses introduce students to statistical and computer programming and a variety of cutting-edge spatial analysis technology.

The Department of Geography and Urban Studies faculty have expertise in a range of GIS applications, including business, environment, geovisualization, health, location analysis, remote sensing and urban. The program curriculum is informed by an advisory board of industry professionals and incorporates real-world experiences through project-based learning and an internship capstone requirement. The program is designed to attract professional data analysts seeking to deepen their understanding of the challenges of working with big geospatial data, as well as GIS specialists seeking to develop a more rigorous understanding of programming and statistics. Graduates are well prepared to pursue certification as a GIS professional (GISP).

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis. Full-time students can complete the program in one calendar year. Part-time students are expected to complete the program in 3 years.

**Affiliation(s):** The program is an affiliated Professional Science Master's program.

**Areas of Specialization:** The program specializes in Geospatial Data Science and Geographic Information Systems and offers coursework in big data, geospatial programming, geovisualization, machine learning and statistics. The Department offers students the opportunity to learn in research laboratory settings equipped with the latest technologies.

**Job Prospects:** The PSM degree provides students with advanced technical knowledge and professional development for jobs in technology-based companies, government agencies and nonprofits. The program trains a workforce that is highly competent to meet the challenges faced by public, regulated and private sector industries and also adaptable to the future needs of industries. It provides access to a professional career, requiring both technical skills and professional development training in areas related to business, ethics and policy. Students seek careers as data consultants, data scientists, geospatial engineers and information officers.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits prior to matriculation. If accepted into the program, these credits may be applied toward the degree. A special exception can be

made for students pursuing the Graduate Certificate in Geospatial Data Science. For more information, please email [psmgis@temple.edu](mailto:psmgis@temple.edu).

**Financing Opportunities:** Typically, the Department does not provide financial assistance to students at the master's level. Teaching and Research Assistantships are reserved for PhD students.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- March 1 – Application Deadline
- July 1 – Late Application Deadline

#### Spring:

- November 1 – Application Deadline
- December 7 – Late Application Deadline

#### Summer:

- April 15 – Application Deadline

Applications are processed as they are received. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members or professional references familiar with the applicant's academic competence. The recommendations may be submitted on the "Reference Report for Graduate Study" or as a traditional letter of recommendation. Letters must be signed and forwarded as a PDF on official letterhead.

**Coursework Required for Admission Consideration:** Applicants should have completed GUS 5031 GIS Programming or an equivalent college-level course in programming and GUS 5161 Statistics for Urban Spatial Analysis or an equivalent college-level introductory statistics course. Professional experience in programming and/or statistics is also acceptable. Students who do not meet these coursework requirements or lack professional experience in programming and/or statistics are required, upon admission, to take GUS 5031 and/or GUS 5161 as electives.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in any field is appropriate. An undergraduate GPA of 3.0 or an undergraduate GPA of 2.5 with 2 to 4 years of relevant professional experience is preferred.

**Statement of Goals:** In approximately 500 to 1,000 words, share why you are interested in this program, your research and academic goals, future career goals, academic and research achievements, and any other information that you believe will be helpful in evaluating your application.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S.

institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- PTE Academic: 60

**Resume:** Current resume required.

**Transfer Credit:** Applicable graduate coursework may be transferred from outside the University, provided that the credits were obtained no more than five years prior to the student's matriculation at Temple and the grades are "B" or better. The credits must be equivalent to coursework offered at Temple. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
GUS 5073	Geovisualization	3
GUS 5162	Advanced Statistics for Urban Applications	3
GUS 8061	Big GeoSpatial Data	3
GUS 8066	Application Development for Geographic Information Systems	3
GUS 8069	GIS Ethics and Professional Practice	3
<b>Electives</b>		
Select four from the following: <sup>1</sup>		12
GUS 5031	GIS Programming <sup>2</sup>	
GUS 5032	Geosimulation	
GUS 5062	Fundamentals of Geographical Information Systems <sup>2</sup>	
GUS 5063	Remote Sensing	
GUS 5065	Urban Geographical Information Systems	
GUS 5066	Environmental Applications of GIS	
GUS 5067	GIS and Location Analysis	
GUS 5068	Census Analysis with Geographical Information Systems	
GUS 5069	GIS for Health Data Analysis	
GUS 5072	Advanced Remote Sensing	
GUS 5161	Statistics for Urban Spatial Analysis <sup>2</sup>	
<b>Capstone Course</b>		
GUS 9187	GIS Capstone	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

Alternately, students may select any course within the range of GUS 5030-5040 and GUS 8060-8070 as an elective toward the degree.

<sup>2</sup>

If, as determined by the faculty advisor, the student has not completed equivalent coursework or lacks equivalent professional experience, they must take GUS 5031, GUS 5062, and/or GUS 5161 as electives.

### Culminating Event:

*Internship with Project:*

GUS 9187, the capstone course, provides an experiential and industry-relevant learning experience for students matriculated in the Professional Science Master's program in Geospatial Data Science at Temple. With the guidance of PSM faculty and prospective employers, students engage in a structured 140-hour internship experience for one term. The student completes a geospatial data science project during the internship that draws on the technical and professional skills developed through the PSM curriculum.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/geospatial-data-science-psm-la-gsds-psm>

### Department Information:

Dept. of Geography and Urban Studies  
308 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
psmgis@temple.edu  
215-204-7692

### Submission Address for Application Materials:

<https://apply.temple.edu/CLAV>

### Department Contacts:

*Senior Manager, Administration:*  
Jessica Brennan  
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215-204-7757

*Program Coordinator:*  
Liz Janczewski  
psmgis@temple.edu  
215-204-3386

*Assistant Director:*  
Lee Hachadoorian, PhD  
lee.hachadoorian@temple.edu  
215-204-3331

*Graduate Chairperson:*  
Allison Hayes-Conroy, PhD  
anhc@temple.edu  
215-204-7692

*Chairperson:*  
Melissa Gilbert, PhD  
mgilbert@temple.edu  
215-204-7692

## History MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in History.

## About the Program

Temple University offers a varied and flexible program for graduate training in History at the master's level. While general requirements ensure that every graduate is familiar with the basic issues of history and the latest approaches of professional historians, students are encouraged to tailor their programs to suit their own particular interests. This program provides enrichment opportunities for teachers in secondary schools, students hoping to pursue history doctorates elsewhere, and professionals in a variety of fields. Philadelphia is a rich public history environment with numerous opportunities for research and fieldwork.

**Time Limit for Degree Completion:** 3 years, although a student whose advisor certifies that they are making satisfactory progress may apply for an extension of their program for up to a maximum of 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students.

**Affiliation(s):** The History program at Temple is affiliated with the Center for the Study of Force and Diplomacy, The Myer and Rosaline Feinstein Center for American Jewish History, the Center for Public History, and Temple's Urban Archives.

**Areas of Specialization:** Faculty members specialize and offer substantial coursework in diplomatic and military history, environmental history, history of capitalism, modern history, public history, U.S. social and cultural history, and urban history.

**Job Prospects:** The program is primarily dedicated to producing well-trained historians who aspire to attain the PhD, teach in primary and secondary schools, and work in history-oriented institutions like archives, museums, historical parks and government agencies.

**Non-Matriculated Student Policy:** Non-matriculated students are permitted to take up to 9 credits of coursework prior to applying. These courses can be transferred into the degree program after admission only if the student earned a grade of "B" or higher.

**Funding Opportunities:** Funding is not offered by the History Department to students studying at the master's level.

## Admission Requirements and Deadlines

### Application Deadline:

NOTE: The optional Public History concentration is not open to students enrolling in the History MA program for the 2023-2024 academic year.

*Fall:* February 15

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from instructors or other individuals who are familiar with the applicant's academic work.

**Coursework Required for Admission Consideration:** Applicants are expected to have majored or minored in History or a related discipline at the undergraduate level. Applicants lacking that qualification are considered on a case-by-case basis.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 500 to 750 words, share a clear statement of your interest in the master's program in History at Temple University and how Temple's program meets your needs, your major historical interests, career goals, and academic and research achievements, if applicable.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Writing Sample:** The writing sample should demonstrate an applicant's ability to conduct research and write a scholarly paper. It should be fully referenced according to a professional, scholarly style manual and should not exceed 30 pages in length.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the History program. Transferred credits must be equivalent to coursework at Temple and carry a "B" grade or better. They may not have been used to obtain another degree. Incoming students may transfer a maximum of 6 credits.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

### Required Courses:

Code	Title	Credit Hours
HIST 8714	Historical Methods	3
Seven 8000-level seminars <sup>1</sup>		21
Two 9000-level research seminars <sup>2</sup>		6
<b>Total Credit Hours</b>		<b>30</b>

1

Course selection is determined by the student's specific interests and goals. It is recommended that one skills-based course, such as HIST 5152 Digital History or HIST 8152 Managing History, be taken. Those with a concentration in Public History are required to take both HIST 8101 Introduction to American History I (to 1865) and HIST 8152 Managing History.



2

Students may take only one writing seminar in an academic term. The second seminar should be taken in the student's last term of study. Students choose whether to combine the two 9000-level courses to produce a master's thesis.

**Internship:** An internship is required only of students pursuing Public History as a primary or secondary field.

**Culminating Events:** Both thesis and non-thesis options are offered as a culminating event. The default position of the department is that students opt for the non-thesis option.

*Non-Thesis Option:*

All MA students are required to take two writing seminars along with the PhD students. The writing seminars are open writing workshops, eschewing a particular time period or geographic focus on which students must concentrate, and instead allowing students to pursue whatever interest they wish. Students work with the course instructor who sets deadlines; provides feedback on argument, structure and writing; and, with input from the faculty mentor, assigns a grade for the course. Students also, where appropriate, work with another faculty mentor whose area of expertise aligns with the student's research topic.

*Thesis Option:*

Before beginning the second writing seminar, students choosing the thesis option must formally declare that they will continue and build on the research paper written for the first writing seminar. Essentially, the first research paper is treated as one chapter in an MA thesis and the second chapter is written during the second writing seminar. Permission from both the faculty mentor who will oversee the project and the MA Coordinator is required. The instructor of the second writing seminar must also be advised of a student's choice to work on a thesis.

The MA thesis in its entirety must be signed by a first reader, i.e., the faculty mentor, and a second reader, who may or may not be one of the faculty members who taught the two research classes. The thesis advisor/first reader gathers the necessary signatures.

Students who pursue an MA thesis but do not complete it must have produced work comparable to two distinct seminar papers to complete the degree program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/history-ma-la-hist-ma>

### Department Information:

Dept. of History  
913 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
history@temple.edu  
215-204-4997

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

## Department Contacts:

*Director of Graduate Studies:*

Rita Krueger, PhD  
9th floor, Gladfelter Hall  
rita.krueger@temple.edu

*Chairperson:*

Petra Goedde, PhD  
petra.goedde@temple.edu  
215-204-7437

## History PhD

### COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in History.

## About the Program

Temple University offers a varied and flexible program for graduate training in History at the PhD level in the Philadelphia area, which is rich in historical archives and museums. The thrust of the PhD program is to prepare professional historians who are equipped to function in academia, public history, education, government service or other related careers.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students are required to complete the PhD program on a full-time basis.

**Interdisciplinary Study:** The History program at Temple is affiliated with the Center for Public History, the Center for the Study of Force and Diplomacy, The Myer and Rosaline Feinstein Center for American Jewish History, and Temple's Urban Archives.

**Affiliation(s):** The History program at Temple is affiliated with the Biographical Dictionary of Pennsylvania Legislators, the Center for the Study of Force and Diplomacy, The Myer and Rosaline Feinstein Center for American Jewish History, the Social Science Data Library, and Temple's Urban Archives.

**Areas of Specialization:** Faculty members specialize and offer substantial coursework in anti-colonial movements, cultural history, diplomatic history, gender, imperialism, international history, military history, political history, race and ethnicity, religious history, sexuality and social history.

Although training is offered in many different historical eras at Temple, most doctoral students write dissertations that focus on the eighteenth, nineteenth or twentieth century.

**Job Prospects:** The program is primarily dedicated to producing well-trained historians who work in academia, public history, government and academically related fields.

**Non-Matriculated Student Policy:** Non-matriculated students are permitted to take up to 9 credits of coursework. These courses can be transferred into the degree program after their admission only if they earn a grade of "B" or higher.

### Financing Opportunities:

*Teaching Assistantships:*

Teaching Assistants (TAs) are required to teach or assist in teaching at Temple. TAs receive tuition waivers for all courses taken during the Fall and Spring terms (up to 9 credits) that contribute to the student's program, plus a stipend and health insurance benefits. All TAs are doctoral students and offers of teaching assistantships are considered as part of the admissions process. New applicants for the PhD program are automatically considered, and teaching assistantships are generally for a period of five years.

#### *Fellowships:*

Presidential and University Fellowships provide support for four years. The Graduate School funds Years 1 and 4; the College of Liberal Arts funds Years 2 and 3. In addition to free tuition and health coverage, these fellowships carry a stipend. While on fellowship, the student must take a minimum of 9 credits each term during the academic year. Students are nominated for a fellowship by the department upon admission to the program. The department can elect to supplement these fellowships with an additional year of teaching assistantship.

#### *Fellowships from the Center for the Humanities at Temple (CHAT):*

Advanced Graduate Scholar Awards provide support to advanced doctoral students pursuing research in the humanities or humanistic social sciences in any school or college at Temple. Fellows receive funding for full-time work on their dissertation. This includes a stipend, tuition, benefits and \$500 in research funding for the term. Fellows receive office space at the Center and participate in the bi-weekly Fellows Seminar.

#### *Dissertation Completion Grant:*

Students may apply for a dissertation completion grant in their last term before graduation. Applications are due to the Director of Graduate Studies on March 1 and October 1. The Director of Graduate Studies or the Department Chair submits a letter of nomination on behalf of each applicant. Departmental nomination does not, however, guarantee the nominee receipt of the dissertation completion grant. Note that receipt of this grant disqualifies a student from receiving further financial support from Temple University.

#### *Appointment as Part-Time Instructor:*

PhD candidates are eligible for appointment as part-time instructors. The Department Chair, after consulting with the Director of Graduate Studies, is responsible for these appointments. Consideration is given to whether the candidate has assisted in the course and, if so, consultation is made with the faculty whom they assisted. Priority is given to qualified students who have not had the opportunity previously to teach independently.

#### *Awards and Grants:*

The History Department and the Center for the Study of Force and Diplomacy provide several awards and grants annually. For more information on these, visit <https://liberalarts.temple.edu/research/labs-centers-and-institutes/center-study-force-and-diplomacy/funding>.

Additional research funding is possible through Charles Library and the Public Policy Lab at Temple.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

Applications are evaluated together after the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from instructors or other individuals who are familiar with the applicant's academic work.

**Coursework Required for Admission Consideration:** Applicants are expected to have majored or minored in History at the undergraduate level or to have received an MA in History. Those who lack either of these qualifications are considered on a case-by-case basis.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 500 to 750 words, share a clear statement of your interest in the doctoral program in History at Temple University and how Temple's program meets your needs, your major historical interests, career goals, and academic and research achievements, if applicable.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Writing Sample:** The writing sample should demonstrate the applicant's ability to conduct research and write a scholarly paper. It should be fully referenced according to a professional, scholarly style manual and should not exceed 30 pages in length.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 39

#### *Required Courses:*

Doctoral students must take at least 11 courses in the History Department, and may elect to take courses outside the department with the permission of the Director of Graduate Studies. A minimum of 10 courses must be completed before the general examination can be taken. Students should consult with their advisor for specific field requirements for the following required courses:

- One methodology seminar [HIST 8714 Historical Methods (3 s.h.)], taken in the first year of study in the first academic term.
- Two 9000-level research/writing seminars (currently HIST 9208 Research Seminar repeated for a total of 6 credits) in which a substantial piece of original research is produced; one course must be taken in the first year, preferably in the second term.
- Eight 5000- and 8000-level reading and literature review courses (24 credits), with the course offerings coordinated by the Director of Graduate Studies; four of the courses are recommended to be taken in the student's area of interest.

- 6 credits of HIST 9994 Preliminary Examination Preparation, HIST 9998 Pre-Dissertation Research, and HIST 9999 Dissertation Research.

**Language Examination:** All students must show competence in at least one foreign language. To demonstrate competence, a student must pass a short translation exam administered, in most cases, by the University's language departments. The dissertation advisor determines whether competence in a second language is required. The language requirement must be satisfied prior to taking the general examination. For doctoral students in American History, the language requirement may be waived at the discretion of the advisor and with the approval of the Director of Graduate Studies.

#### **Culminating Events:**

##### *Preliminary Examination:*

All doctoral students take a preliminary exam in the September of their third term of study. The preliminary exam is a take-home exam consisting of one synthetic question covering one of two areas: either Environments, Cities, and Cultures (Track I) or War, Empire, and Society (Track II), each with its respective list of 50 books for students to study. Students choose one area/track and, at the exam, choose one of two questions in that area. They have one week to write an essay of no more than 6,000 words. In the preceding Spring term, the exam committee is responsible for conducting a workshop with first-year doctoral students in which the expectations of the preliminary exam are discussed.

The exam date is set, and the exam itself is graded by a pair of Graduate Faculty in each area who have been appointed by the Director of Graduate Studies. The exam is graded blindly by the exam committee. Doctoral students who twice fail the preliminary exam are dismissed from the program.

##### *General Examination:*

Doctoral students who pass the preliminary exam proceed to the general exam, which consists of three fields, each guided by a different member of the faculty. Note that the dissertation advisor should be the examiner in either the Geographic and/or Chronologically Distinct Field or the Thematic Field:

- Geographic and/or Chronologically Distinct Field – The reading list should include 75-80 books and articles that examine a broad field in terms of time and space, e.g., 20<sup>th</sup>-Century U.S. History, Atlantic World, Latin American or Caribbean History, or Southeast Asian History. Students designate a member of the Graduate Faculty to examine them in this field and collaborate with that faculty member in creating the reading list.
- Thematic Field – The reading list is made up of 50 books and key articles that explore a more focused and topical area, such as Diplomatic History, Labor History, Queer Studies or Urban History. Students designate a member of the Graduate Faculty to examine them in this field and collaborate with that faculty member in creating the reading list.
- Teaching Field – Students submit a detailed and largely original syllabus, ideally for an undergraduate class, covering either the geographic field (a survey class) or the thematic field (a more specialized, upper-level class). They designate a faculty member to lead a discussion of the syllabus. The other two members of the exam committee are welcome to participate in this discussion. Students should submit the syllabus to all three members of the examining committee 72 hours before the exam.

Doctoral students typically complete the general exam in their fifth term. This oral exam is two hours long. All three members of the exam committee leading the exam in the Geographic/Chronological Field, Thematic Field, and Teaching Field need to be present at the exam. Students are asked to discuss issues pertinent to their prepared fields of study and teaching. To pass the exam, all three members of the committee must approve of the student's performance. Students may retake the oral exam if they fail. After failing twice, students are dismissed from the program.

University-wide regulations governing examinations when a PhD student matriculated apply throughout their career until the degree is received. If departmental or college regulations change, the student similarly follows the rules in place at the time of their matriculation unless they obtain approval of the advisory committee and written permission from the Graduate Council to follow more recent requirements.

Students preparing to take their general examination should confirm times and dates with their other committee members and the Graduate Administrator. All parties involved should receive confirmation of the time, date and room well in advance of the examination.

##### *Dissertation Committee:*

After passing the general exam and in consultation with the primary advisor, students select the members of their Doctoral Advisory Committee. The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members, two of whom are from the History Department. The student's primary advisor functions as the chair of this committee and is responsible for overseeing and guiding the student's progress, coordinating the responses of committee members, and informing the student of their academic progress.

Further, either during the process of writing the dissertation prospectus, or at some time following its approval, students, again in consultation with their primary advisor, select a qualified external reader of the dissertation. The external reader may either be on the faculty of a Temple University department other than History or a member of the faculty of a college/university other than Temple. Once the external reader has agreed to serve in the capacity (and received approval from the Graduate School), that person is added to the Dissertation Examining Committee. The total membership of the Dissertation Examining Committee may exceed four faculty (the minimum being the three Graduate Faculty members who approved the prospectus plus the external reader). A majority of the committee's members, however, must be Temple University History Department Graduate Faculty.

##### *Prospectus:*

All doctoral candidates must prepare a dissertation prospectus in close consultation with the advisor prior to advancing to PhD candidacy. This document, usually 15 to 20 pages in length, must achieve the following goals:

1. Identify the major research question of the dissertation.
2. Situate the dissertation in the existing scholarly literature.
3. Lay out a coherent research strategy that identifies the archives and sources that will be used.
4. Include a timeline for research and writing of the dissertation.

The prospectus defense is a public event, open to History Department faculty and doctoral students. At this event, the doctoral candidate makes a brief presentation lasting approximately 10 to 20 minutes, outlining the contents of the prospectus. A copy of the dissertation prospectus is made

available at least one week before the defense for examination by the faculty. During the defense, faculty and students engage the candidate in vigorous conversation about the proposed project.

The prospectus must be defended before the end of the sixth term. Failure to defend the prospectus by the end of the sixth term is grounds for dismissal from the doctoral program. At the end of the defense, the candidate's Doctoral Advisory Committee meets privately to vote on advancing the student to PhD candidacy.

#### *Dissertation:*

Dissertations must be written and defended within seven years of matriculation. Students who have made satisfactory progress toward completing their dissertation can apply for an extension of up to three additional years. Therefore, the maximum total time permitted for completing the PhD program is ten years. Students in the PhD program must register each term until all requirements for the degree have been fulfilled unless they receive a leave of absence.

All dissertations must be prepared in accordance with the guidelines of the *Dissertation and Thesis Handbook*. Students should arrange a procedure for submitting draft chapters for review to their primary advisor and other members of the Doctoral Advisory Committee.

When the chair and a majority of the Dissertation Examining Committee agree that the written dissertation is of sufficient quality to be defended, the student should arrange with the Committee a time for the oral defense to be held. The student should then notify the Graduate Administrator of the proposed defense date. The oral defense must be publicly announced in writing at least ten days in advance of the date of the defense and must be open to the public. A copy of the dissertation is made available to the department at least one week before the defense for examination by the faculty.

An Oral Defense Chair must be identified. This person must be a Temple University presidential faculty member and may not be the chair of the student's Dissertation Examining Committee.

In the event that a member of the Dissertation Examining Committee cannot attend the defense, teleconferencing or videoconferencing is arranged. This arrangement must be approved by the Graduate School prior to the defense. No more than one member of the Dissertation Examining Committee can be physically absent from the defense.

The dissertation defense is a public event, open to History Department faculty and doctoral students. At this event, the doctoral candidate makes a brief presentation, outlining the main argument of the dissertation. During the defense, faculty and students engage the candidate in a vigorous conversation about the project. At the end of the defense, the Dissertation Examining Committee meets privately to vote on the candidate's performance. The candidate is notified immediately of the decision.

## Contacts

### Department Web Address:

<https://www.temple.edu/academics/degree-programs/history-phd-la-hist-phd>

### Department Information:

Dept. of History  
913 Gladfelter Hall  
1115 W. Polett Walk

Philadelphia, PA 19122-6089  
history@temple.edu  
215-204-7461

### Mailing Address for Application Materials:

<https://apply.temple.edu/CLAV>

### Department Contacts:

#### *Director of Graduate Studies:*

Rita Krueger, PhD  
9th floor, Gladfelter Hall  
rita.krueger@temple.edu

#### *Chairperson:*

Petra Goedde, PhD  
petra.goedde@temple.edu  
215-204-7437

## Liberal Arts MLA

### COLLEGE OF LIBERAL ARTS

Learn more about the Master of Liberal Arts.

### About the Program

The Master of Liberal Arts is an interdisciplinary degree that allows students to take courses from a variety of graduate programs in the College of Liberal Arts and elsewhere in the University. Students are encouraged to develop an individual program of study, based on their own interests and objectives and in consultation with the MLA Program Director. Our students are generally working adults who want to grow intellectually by extending their liberal arts education. Some may be seeking to move toward a doctorate and want to prepare themselves for more advanced graduate coursework. Others may be interested in changing careers and wish to gain post-baccalaureate experience. The MLA degree might be relevant, for example, for those who want to move into educational administration, library work, public policy, the law or teaching.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main and Center City, where both required and elective courses can be taken

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. However, the program allows for flexibility and students are able to take courses at other times. The degree program can be completed on a full- or part-time basis.

**Continuous Enrollment:** Students must maintain continuous enrollment. When a student knows that they will not register for the Fall or Spring term, they must submit a "Leave of Absence Request" form, found in TUportal under the Tools tab within "University Forms," along with the \$25 fee to the MLA administrative office. If a student fails to register for two consecutive terms without submitting Leave of Absence forms, they may be dismissed from the program for non-continuous enrollment.

**Interdisciplinary Study:** Students are introduced to interdisciplinary thinking through MLA 5011 Introduction to Interdisciplinary Studies, a graduate writing and research methods course that entails peer review and collaborative learning and culminates in a final project based on the course theme. Students also select from a range of MLA "Topics"

courses while continuing to develop individual programs of study along interdisciplinary lines. Specific themes for all MLA courses may change for any given academic term depending on the instructor. In addition to completing the required MLA course, students may choose to concentrate their course of study by undertaking coursework outside of the MLA curriculum.

**Areas of Specialization:** The MLA program draws on faculty from across the range of disciplines in the College of Liberal Arts, with an emphasis on applied humanities, engaging such areas as arts and culture, media studies, public history and social theory.

**Job Prospects:** While not a professional degree, the MLA degree may be applicable to a wide range of future graduate training and/or employment: from teaching and educational administration to library work; from public policy to arts management; and from government, the law and public service to private sector work.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of graduate work at Temple University before applying to the program. Coursework may be credited to the MLA degree with approval of the MLA Advisory Committee.

**Financing Opportunities:** Funding opportunities are not available.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1

Applications are accepted on a rolling basis, but all application materials must be received by the deadline to be considered for that term. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 3*

*From Whom:* Letters of recommendation should be requested from individuals who are well positioned to evaluate the applicant's academic abilities and accomplishments as well as potential for graduate study.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must hold a baccalaureate degree from an accredited college or university. A minimum undergraduate GPA of 3.0 is required for admission.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your academic and research achievements, current research interests, and why Temple's MLA program and interdisciplinary graduate study in the liberal arts are the right match to attain your academic and professional goals.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current academic CV or professional resume required.

**Transcripts:** An official transcript from each postsecondary institution attended is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the MLA program upon approval. The credits must be equivalent to coursework offered at Temple and not older than five years. The grade(s) earned must be a "B" or better in order to transfer. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

### Required Courses:

Code	Title	Credit Hours
MLA 5011	Introduction to Interdisciplinary Studies	3
	Three MLA "Topics" courses	9
	Electives	18
<b>Total Credit Hours</b>		<b>30</b>

### Culminating Event:

#### *Qualifying Paper:*

All candidates for the MLA degree are required to write a Qualifying Paper, which is typically 40 to 50 pages in length. It should demonstrate the student's ability to:

- write analytically on a topic of their choice;
- read, absorb and evaluate scholarly thought and research; and
- develop and establish their own perspective on the problem being examined.

The Qualifying Paper is submitted for approval to the MLA Advisory Committee or other graduate faculty chosen by the MLA program. Revisions may be requested.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/liberal-arts-mla-la-liba-mla>

### Department Information:

Master of Liberal Arts Program  
818 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
latasha.goodman@temple.edu  
215-204-8516

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

## Department Contacts:

### Admissions:

LaTasha Goodman  
Administrator  
latasha.goodman@temple.edu  
215-204-8516

### Program Director:

Michael Szekely  
mszekely@temple.edu

## Neuroscience: Systems, Behavior and Plasticity MS

### COLLEGE OF LIBERAL ARTS

Learn more about the Master of Science in Neuroscience: Systems, Behavior and Plasticity.

## About the Program

Neuroscience is the study of the nervous system, including the brain, spinal cord, networks of nerve cells called neurons, and how these cells interact to generate behavior. This is a rapidly evolving field with applications ranging from health disciplines to economics and public policy. The philosophical goal of the MS program in Neuroscience: Systems, Behavior and Plasticity is to provide advanced training in neuroscience and professional development via coursework and a faculty-mentored research experience to students who have completed an undergraduate major in Neuroscience or a closely related scientific area and who wish to extend their studies before moving on to other post-graduate training or professional employment. Students in this program achieve the following objectives:

- Build a core knowledge in specific areas of neuroscience, including behavioral, cellular, molecular and systems.
- Develop a general professional competence in oral and written expression as well as in the critical analysis of research articles.
- Learn to understand, create and undertake hypothesis-based approaches to research.
- Train in a variety of techniques and approaches to studying the nervous system.
- Develop a keen sense of analytical thinking and logic in the evaluation of their own work and that of others.
- Become effective teachers and communicators of neuroscience.
- Gain independence in thinking, teaching, laboratory work and communicating.

**Time Limit for Degree Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program is expected to be completed on a full-time basis.

**Job Prospects:** Because the brain is involved in every important human endeavor, understanding the brain and its functions opens career paths in multiple fields, including education, engineering, law, medicine, psychology and public policy. Master's-level education in neuroscience provides students with a wide range of career options, including:

- Biostatistician
- Clinical data manager
- Counselor
- Environmental health safety officer
- Medical or science writer
- Public health administrator
- Public policy strategist
- Regulatory affairs specialist
- Research associate at academic research institutes or in private industry
- Research and teaching administrator
- Teacher/lecturer

The United States Bureau of Labor Statistics identifies the breadth of employment opportunities in neuroscience along with the salary ranges for different careers options based on different types of employers in its Occupational Outlook Handbook.

**Non-Matriculated Student Policy:** Non-matriculated students are eligible to take graduate courses. If accepted into the program, up to 9 credits may be applied toward the degree program.

**Financing Opportunities:** Assistantships are not available for the MS program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty who are familiar with the applicant's academic abilities.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must hold a baccalaureate degree (BA or BS) in one of the following disciplines:

- Bioengineering
- Biology
- Chemistry
- Human Movement Science
- Kinesiology
- Mathematics
- Neuroscience
- Physics
- Psychology
- Public Health

Other relevant disciplines, combined with or including coursework in Biology, Chemistry, Mathematics/Statistics, Neuroscience, Physics and/or Psychology, may be accepted after individual evaluation of the applicant's qualifications.

A minimum GPA of 3.2 in undergraduate work is required for consideration of the application to the program.

**Statement of Goals:** In approximately 500 to 1,000 words, share your specific interest in Temple's program, academic achievements, and future career goals.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- PTE Academic: 60

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
NSCI 5001	Systems and Behavioral Neuroscience	3
NSCI 5002	Neurochemistry	3
NSCI 5016	Professional Development in Neuroscience	3
NSCI 9381	Readings in Neuroscience (3 terms)	3
PSY 5003	Advanced Statistics	3
PSY 8712	Core Course in Behavioral Neuroscience	3
<b>Electives</b> <sup>1</sup>		<b>6</b>
<b>Capstone Course</b>		
NSCI 9991	Directed Research	6
<b>Total Credit Hours</b>		<b>30</b>

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Students may select any elective relevant to their area of interest or specialization with approval from the Program Director.

**Culminating Event:**

*Master's Project:*

Students are required to work on a master's project over both terms in their second year of the program. The purpose of the project is not only to train students in specific neuroscientific techniques, but also how to develop a scientific and analytical approach toward a problem, formulate clear research questions, conduct experiments, and analyze/interpret data. Depending on their career goals, students may opt to engage either in a laboratory-based research project or in a non-laboratory project.

Students who are motivated to join a doctoral program or are interested in a research position gain by working independently on a neuroscientific investigation under the supervision of a faculty member who maintains an active neuroscience research program. On the other hand, students who are not intending to engage in bench-level research upon graduation and are interested in non-research jobs, such as counseling, research administration, public policy and teaching, may choose to engage in a non-laboratory project of a similar scope.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/neuroscience-systems-behavior-and-plasticity-ms-la-nsbp-ms>

### Department Information:

College of Liberal Arts Neuroscience Program  
618 Weiss Hall  
1701 N. 13th Street  
Philadelphia, PA 19122-6085  
neuro@temple.edu  
215-204-3441

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Program Coordinator:*  
Angela Miller  
adgmiller@temple.edu  
215-204-3441

*MS Program Director:*  
Mathieu Wimmer, PhD  
mathieu.wimmer@temple.edu  
215-204-7495

## Philosophy MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Philosophy.

### About the Program

Temple's Department of Philosophy has strengths in several areas of philosophical study. The department has a rich history and continuing presence in the field of aesthetics. The department also has expertise in ancient Greek philosophy, epistemology, ethics, feminist philosophy, Kantian and post-Kantian German philosophy, philosophy of mind, philosophy of race, philosophy of science, and political philosophy.

The MA program is designed for students to begin advanced training in the field of philosophy. Students may plan to continue with a PhD program elsewhere, or may be satisfied with a master's degree for personal enrichment or for pre-college teaching. Students who plan at the outset to pursue the PhD at Temple should apply to the PhD. The MA can be earned on the way to the PhD, if desired.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main, Center City

**Full-Time/Part-Time Status:** Students complete the degree program through classes largely offered before 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages students in the MA program to engage in a limited amount of interdisciplinary coursework. Students generally take courses in Africology and African American

Studies, Art History, English, Psychology or Women's Studies. A dual-degree program earning the MA in Philosophy/MA in Urban Bioethics is offered in conjunction with the Lewis Katz School of Medicine.

**Affiliation(s):** The Greater Philadelphia Consortium provides expanded course options for graduate work in Philosophy. Students enrolled in the MA program at Temple may take graduate courses at the University of Pennsylvania and Villanova University.

**Job Prospects:** MA graduates often find employment as teachers in community colleges and in other professions. For university teaching, the PhD is necessary.

**Non-Matriculated Student Policy:** Non-matriculated students may register for courses after an interview with the Director of Graduate Studies, at which time they should present academic transcripts. Credit toward a subsequent degree program at Temple University is limited to 9 credits.

**Financing Opportunities:** University Fellowships, Graduate Assistantships, and Academic Internships are ordinarily reserved for PhD students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

Admission is competitive and determined only once a year.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with your academic competence.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, preferably with some coursework in Philosophy.

**Statement of Goals:** In approximately 500 to 1,000 words, address your interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** A short curriculum vitae should be submitted with your application.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should be 15-20 pages

in length and fully referenced according to a professional, scholarly style manual. It should be in the area of Philosophy or a closely related field.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

### Required Courses:

The Thesis Option requires students to take 24 credits in Philosophy and 6 credits in thesis writing. The Non-Thesis Option requires students to take 6 credits in electives rather than in thesis writing.

For a current copy of the Departmental Graduate Handbook, which lists all requirements, email [claphilo@temple.edu](mailto:claphilo@temple.edu) or call 215-204-1742.

### Culminating Events:

#### *Thesis Option:*

A thesis is required when choosing the Thesis Option.

#### *Non-Thesis Option:*

Successful completion of coursework constitutes the culminating event for this option.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/philosophy-ma-la-phil-ma>

### Department Information:

Dept. of Philosophy  
731 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
[claphilo@temple.edu](mailto:claphilo@temple.edu)  
215-204-1742

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

#### *Admissions:*

Irina Segal  
[irina.kasharsky@temple.edu](mailto:irina.kasharsky@temple.edu)  
215-204-1742

#### *Director of Graduate Studies:*

Lara Ostaric, PhD  
[lara.ostaric@temple.edu](mailto:lara.ostaric@temple.edu)

#### *Chairperson:*

Miriam Solomon, PhD  
[msolomon@temple.edu](mailto:msolomon@temple.edu)

## Philosophy PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Philosophy.



## About the Program

Temple's Department of Philosophy has strengths in several areas of philosophical study. The department has a rich history and continuing presence in the field of aesthetics. The department also has expertise in ancient Greek philosophy, epistemology, ethics, feminist philosophy, Kantian and post-Kantian German philosophy, philosophy of mind, philosophy of race, philosophy of science, and political philosophy.

The PhD program is designed to provide students with a breadth of knowledge in philosophy while emphasizing depth of knowledge through intensive work on particular philosophical issues of interest to the student. The program stresses early development of professional writing standards and oral skills. PhD students are generally given the opportunity to teach courses under the guidance of the department's Teaching Mentoring Program.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main, Center City

**Full-Time/Part-Time Status:** Students complete the degree program through classes largely offered before 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program permits students in the PhD program to take a limited number of courses in non-Philosophy programs at Temple. Students may also earn the graduate certificate in Gender, Sexuality and Women's Studies in conjunction with the PhD in Philosophy. A dual-degree program earning the PhD in Philosophy/MA in Urban Bioethics is offered in conjunction with the Lewis Katz School of Medicine.

**Affiliation(s):** The Greater Philadelphia Consortium provides expanded course options for graduate work in philosophy. Students enrolled in the PhD program at Temple may take graduate courses at the University of Pennsylvania and Villanova University.

**Job Prospects:** Graduates typically find employment in college or university teaching and research. A departmental placement committee assists students with the job search.

**Non-Matriculated Student Policy:** Non-matriculated students may register for courses after an interview with the Director of Graduate Studies, at which time they should present academic transcripts. Credit toward a subsequent degree program at Temple University is limited to 9 credits.

**Financing Opportunities:** Support is available in the form of University Fellowships, Teaching Assistantships, and Academic Internships. University Fellows are typically supported with a stipend and full tuition remission for four years, teaching for two of those years. Teaching Assistants are typically required to teach introductory philosophy courses or recitation sections in large courses taught by professors. They receive a stipend and full tuition remission. All PhD applications are automatically considered for financial aid.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15

Admission is competitive and determined only once a year. Applications to the PhD program are automatically considered for financial aid.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with your academic competence.

**Coursework Required for Admission Consideration:** Applicants typically have majored or minored in Philosophy for their bachelor's degree.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Philosophy is standard, although not mandatory, for admission into the program.

**Statement of Goals:** In approximately 500 to 1,000 words, address your interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Required. Scores are typically in the 65 to 75% range on the verbal and quantitative sections.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0
- PTE Academic: 72

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should be 15-20 pages in length and fully referenced according to a professional, scholarly style manual. It should be in the field of Philosophy or a closely related area.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 42

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
	Epistemology/Metaphysics Course	3
	History of Philosophy Courses	9
	Select one course each in Ancient, Kant/Hegel, and 17th/18th Century Philosophy	
	Values/Ethics Course	3
	<b>Electives</b> <sup>1</sup>	<b>21</b>
	<b>Research Courses</b>	<b>6</b>
PHIL 9994	Preliminary Examination Preparation	
PHIL 9998	Pre-Dissertation Research	

PHIL 9999 Dissertation Research

**Total Credit Hours****42**

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Of the 21 elective credits, 9 credits may be taken in cognate disciplines, subject to determination by the Director of Graduate Studies.

For a current copy of the Departmental Graduate Handbook, which lists all requirements, email claphilo@temple.edu or call 215-204-1742.

**Language/Logic Examination:** Students must pass either a written proficiency examination in French, German, or Ancient Greek, or a logic examination. Other languages may be approved by the Director of Graduate Studies, provided the student makes a compelling case that the language in question is useful for dissertation work.

**Culminating Events:***Dissertation Advising:*

It is the student's responsibility, in consultation with their primary advisor, to assemble three advisory committees. It is best to form a committee that gives the student a variety of sympathetic but critical perspectives on the project. Three distinct committees, which are largely composed of the same members, must be in place at different phases of the proposal and dissertation processes. The committee guidelines are outlined below:

1. **Proposal Advisory Committee:** This committee guides the student through the preparation and defense of their dissertation proposal. The Proposal Advisory Committee is composed of three Graduate Faculty members from the Philosophy Department. One member is named Chair. Additional members from outside the Philosophy Department may be included with written approval from the Chair and the Graduate School. Normally, the Proposal Advisory Committee becomes the Doctoral Advisory Committee upon approval of the proposal.
2. **Doctoral Advisory Committee:** This committee guides the student through all stages of the dissertation. The Doctoral Advisory Committee must be in compliance with University guidelines as prescribed by the Graduate School. The committee must be composed of at least three Temple University Graduate Faculty members, two of whom must be from the Philosophy Department. A member of the committee from the Philosophy Department is named Chair.  
If changes must be made in the Doctoral Advisory Committee after the student is elevated to candidacy, such changes must be approved by the Chair of the Advisory Committee and the Graduate School. A "Request for Change in Dissertation Committee" form, found in TUportal under the Tools tab within "University Forms," must be filed.
3. **Dissertation Examining Committee:** This committee consists of the Doctoral Advisory Committee plus one Graduate Faculty member from outside Temple's Philosophy Department OR one Outside Examiner. The Outside Examiner may be from another academic institution; should not have been a part of the dissertation writing process or the Doctoral Advisory Committee; and must be approved at least two weeks prior to the defense. The Chair of the Dissertation Examining Committee must be a member of the Temple University Graduate Faculty, but may not be the Chair of the student's Doctoral Advisory Committee. The Chair of the Dissertation Examining Committee must be identified when the defense is posted through the Graduate School.

*Preliminary Examinations:*

The preliminary examinations consist of writing original research papers in:

1. History of Philosophy, defined as Ancient Philosophy through the end of the 19th Century; and
2. Contemporary Philosophy, emphasizing constructivist, analytical or other philosophical approaches to a particular issue.

Students may submit either the historical or the contemporary paper first. These papers are typically developed from a student's best coursework papers and are generally revised through consultation with the professors who originally evaluated them. *The papers should aspire to meet the standards of publication.* NOTE: A successful course paper typically requires considerable work to become a successful preliminary paper. Preliminary examination essays should show both a mastery of relevant primary and secondary literature and put forward ideas that are an original contribution to the field. Graduate students are strongly encouraged to consult with faculty several months before their preliminary examination essays are due.

The first Preliminary Examination Paper is due by 4:00 p.m. on the second Monday in October at the beginning of the student's second year, and the second paper submission is due by 4:00 p.m. on the second Monday in October at the beginning of the student's third year. Papers must be prepared for blind review and submitted via e-mail to the Graduate Coordinator. Papers should include an abstract of not more than 200 words.

All papers are prepared for blind review and evaluated by three faculty members. Papers are graded High Pass/Pass/Borderline/Fail. Papers must receive at least two grades of Pass in order to pass. Papers that receive two Borderline grades, a Fail and a Borderline, or two Fail grades automatically fail. Students get a second chance on each of the preliminary papers, but students who fail a preliminary examination twice are dismissed from the program. Second-year students who fail a preliminary examination resubmit, along with their second preliminary examination, in the October of their third year. Third-year students who fail a preliminary examination for the first time resubmit by 4:00 p.m. on the second Monday of the following February.

Students must be registered for at least one credit of PHIL 9994 Preliminary Examination Preparation in the terms in which they submit their preliminary examinations. Students who are required to resubmit their preliminary examinations must re-register for one credit hour of PHIL 9994 in the term in which the exam is to be resubmitted.

*Dissertation Proposal:*

The dissertation proposal is an opportunity for the student to develop and clearly articulate the project of the dissertation. The dissertation proposal has two components: written and oral. The written component should be 15-20 pages in length and include a statement of the problem, a critical literature review, and a sketch of how the student intends to address the philosophical problem(s) at hand. The student needs to make clear how the dissertation will be an original contribution to the field of philosophy. A detailed bibliography and chapter outline are also expected. The approved dissertation proposal serves as a contract between the student and their Doctoral Advisory Committee: the student agrees to complete the work outlined in the proposal under the guidance of the Doctoral Advisory Committee.

When the written component of the proposal is judged ready by the Proposal Advisory Committee, an oral examination date is set. At least two weeks before this examination, the defense is announced to the

department faculty and at least two copies of the written proposal are made available in the Graduate Coordinator's office.

The oral examination, which is conducted by the Proposal Advisory Committee, constitutes an opportunity for the student's committee to make positive suggestions as well as to test the candidate's preparedness. Other faculty may attend the oral examination and ask questions after the Proposal Advisory Committee has completed its questioning. The Proposal Advisory Committee decides, by majority vote, whether the candidate passes or fails the written and oral parts of the dissertation proposal.

*Dissertation:*

The dissertation should constitute a definitive and original contribution to the field of philosophy. It needs to show mastery of the relevant philosophical literature. The dissertation should be in the hands of the Dissertation Examining Committee by October 1 for December graduation and by March 1 for May graduation.

All PhD students must formally and publicly defend their dissertations before the Dissertation Examining Committee. The candidate must submit the official, signed notice of the oral defense to the Graduate School 10 or more working days before the scheduled defense. A defense cannot be held without written confirmation of approval and receipt of the defense paperwork from the Graduate School.

The defense should be announced publicly and is open to all members of the University. During the defense, primary questioning is restricted to the members of the Dissertation Examining Committee. Then, Philosophy Department faculty members who have submitted written questions in advance may address the candidate. Lastly, other members of the Philosophy Department faculty may address the candidate. The Dissertation Examining Committee decides, by majority vote, whether the candidate passes or fails.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/philosophy-phd-la-phil-phd>

### Department Information:

Dept. of Philosophy  
731 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
claphilo@temple.edu  
215-204-1742

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Admissions:*  
Irina Segal  
irina.kasharsky@temple.edu  
215-204-1742

*Director of Graduate Studies:*  
Lara Ostaric, PhD

lara.ostarc@temple.edu

*Chairperson:*

Miriam Solomon, PhD  
msolomon@temple.edu

## Political Science MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Political Science.

### About the Program

The primary mission of the Political Science Department's graduate program is to prepare students for careers in academia. The department gives equal emphasis to training students for both the research and teaching sides of such a career. Most students in the MA program intend to pursue a PhD either at Temple or elsewhere, immediately after graduation or after a few years of employment. Those who wish to pursue a PhD at Temple are strongly encouraged to apply directly to the PhD program at the outset of the admissions process. Some MA students use the degree to establish or strengthen credentials in teaching or for private/public sector positions, while others want to strengthen their background for applications to other professional degree programs.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 3:00 p.m. The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** We offer courses in American Politics, Comparative Politics, International Relations, Political Theory, as well as methodology.

**Job Prospects:** Most students in the MA program intend to pursue a PhD immediately after graduation or after a few years of employment. Some MA students use the degree to establish or strengthen credentials in teaching or for private/public sector positions, while others want to strengthen their background for applications to other professional degree programs.

**Non-Matriculated Student Policy:** Prior to applying for admission, students sometimes want to take courses as non-degree students. Those who wish to do so must first obtain the approval of the Graduate Chair in the Political Science Department to determine if the individual stands a reasonable chance for admission to the MA or PhD program. Then, the prospective student must visit the Office of Continuing Studies with transcripts from all institutions attended, including the one that conferred the undergraduate degree, to be enrolled in the coursework.

**Financing Opportunities:** MA students are not eligible for departmental assistantships.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

Late applications may not be considered.

APPLY ONLINE to this graduate program.

**Letters of Reference:**

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program, research goals, future career goals, and academic and research achievements.

NOTE: Students who are ultimately interested in earning a doctoral degree in Political Science at Temple University should apply directly to the PhD program.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should be no more than 25 pages and fully referenced according to a professional, scholarly style manual.

**Transfer Credit:** Graduate coursework in Political Science may be transferred from outside the University, provided that the credits were obtained no more than five years prior to the student's matriculation at Temple and the grades are "B" or better. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Course</b>		
POLS 8001	Political Statistics I	3
<b>Subfield Courses</b>		
Select three from the following:		
POLS 8101	Government in American Society	
POLS 8201	Comparative Politics	
POLS 8301	International Politics	
POLS 8401	Introduction to Political Theory	
<b>Electives</b> <sup>1</sup>		15
<b>Methodology Course</b>		
POLS 8002	Qualitative Research Methods	3

or POLS 8003 Political Statistics II

**Total Credit Hours**

**30**

1

All students should consult with their faculty advisor on course selection and exam preparation. Students select two elective courses in two main fields and one in a third minor field. Those who plan to continue into the PhD program should take their two main-field elective courses in the two fields in which they plan to complete written comprehensive exams and the third in a minor field.

**Culminating Event:**

*Seminar Paper:*

Students must complete a seminar paper in one of their elective courses. All graduate elective courses give students the option of writing a seminar paper as a central element of the course grading. Students must submit the seminar paper, with the instructors' comments and grades, to the Graduate Chair. The Graduate Chair must certify that these papers meet the seminar paper requirement (i.e., contain original arguments grounded in extensive reference to relevant secondary and/or primary sources). Such certification must be granted before the degree is awarded.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/political-science-ma-la-pols-ma>

### Department Information:

Dept. of Political Science  
408 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
215-204-7796

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Admissions:*

Anna Hunter  
Graduate Coordinator  
annahunter@temple.edu  
215-204-7796

*Graduate Chairperson:*

Adam Ziegfeld, PhD  
psgrad@temple.edu

*Chairperson:*

Mark Pollack, PhD  
mark.pollack@temple.edu  
215-204-7709

## Political Science PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Political Science.

## About the Program

The primary mission of the Political Science Department's graduate program is to prepare students for careers in academia. The department gives equal emphasis to training students for both the research and teaching sides of such a career. Many of our graduates also successfully apply their political science training to non-academic careers. The PhD program offers study in four broadly defined fields: American Politics, Comparative Politics, International Relations and Political Theory. The PhD program seeks primarily to develop the research skills and substantive knowledge necessary for successful completion of a dissertation.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 3:00 p.m. The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** We offer courses in American Politics, Comparative Politics, International Relations, Political Theory, as well as methodology. We typically accept students wishing to specialize in American Politics, Comparative Politics or International Relations.

**Job Prospects:** Most PhD students are preparing for college teaching careers, and a good number secure teaching positions at colleges and universities. Others pursue careers in government or other non-academic research positions.

**Non-Matriculated Student Policy:** Prior to applying for admission, students sometimes want to take courses as non-degree students. Those who wish to do so must first obtain the approval of the Graduate Chair in the Political Science Department to determine if the individual stands a reasonable chance for admission to the MA or PhD program. Then, to be enrolled in coursework, the prospective student must visit the Office of Continuing Studies with transcripts from all institutions attended, including the one that conferred the undergraduate degree.

### Financing Opportunities:

#### *Departmental Support:*

The department typically supports a portion of its graduate students as Teaching or Research Assistants. Students may not only assist professors in research and teaching, but also may teach courses on their own. Assistantships include full tuition, a stipend and health insurance. Assistantships are awarded on a competitive basis. The amount of support available for entering students varies from year to year, in accordance with the University budget and contractual commitments with the Temple University Graduate Students' Association (TUGSA). Assisting in research and undergraduate teaching helps graduate students integrate their studies and prepare for examinations, and gives those who plan on pursuing an academic career valuable experience.

In making funding awards, the Graduate Chair and committee place high priority on a student's academic performance and potential. The following rules and criteria guide the committee's decisions for continuing students:

- The student must be making normal progress toward meeting their degree requirements. *Two incompletes disqualify a student from consideration for financial assistance.* Advanced students should note that no student will be awarded financial assistance who has

not successfully defended a dissertation prospectus within a year of passing the comprehensive examinations.

- To spread support more broadly and to provide an incentive for students to move quickly through coursework and examinations and into the dissertation, the department typically will not provide financial aid for students who have already had five years of support as a Graduate Assistant.

#### *Graduate School Support:*

The Graduate School offers Presidential and University Fellowships to the very best applicants on a competitive basis for newly admitted PhD students. Each fellowship offers a stipend plus tuition, for up to two years, plus up to two additional years of support as a Teaching and/or Research Assistant. Fellowships can be offered to candidates who are newly matriculating in the doctoral program at Temple.

For students nearing completion of their dissertations, the Graduate School offers a limited number of Doctoral Dissertation Completion Grants. Doctoral candidates with approximately six months of anticipated writing to complete their dissertations may apply for this grant. These awards are given on a competitive basis. Students should apply for these awards only when all other department and university support has been exhausted, and when a persuasive case can be made that the dissertation will be completed within the time period of the grant. No more aid will be available after the awarding of such a grant. Interested students should speak to the Graduate Chair at least one term before they plan to apply for the award. Application can be made for Fall, Spring or Summer funding, when available.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

Late applications may not be considered.

A limited number of fee waivers are available for applicants for whom the application fee represents a financial hardship. U.S. applicants should verify whether they are eligible for a fee waiver from the Graduate School by visiting <https://grad.temple.edu/admissions/how-apply>. By November 20, applicants who want to be considered for a fee waiver from the department should complete their application to the point of payment and then fill out the request form found at <https://forms.office.com/r/F9XBGEITYY>. Applicants are notified by December 1 as to whether they will receive a fee waiver.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should be no more than 25 pages and fully referenced according to a professional, scholarly style manual.

**Advanced Standing:** For students entering the PhD program who have received an MA degree elsewhere, up to 18 credits may be applied to the doctoral program, provided they are relevant to the department's required courses. These credits must have been obtained no more than five years prior to the student's matriculation at Temple and the grades must be "B" or better. The Graduate Chair decides which courses students may transfer. As a general rule, transfer students should expect that they will have to complete much of the required coursework in residence. Students transferring into the PhD program should note that it is advisable to take courses from Temple faculty in their major and minor fields before taking the PhD Qualifying Exams in those two fields.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the PhD:* 45, including 30 credits at the master's level and 15 at the doctoral level

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
Select two from the following:		6
POLS 8101	Government in American Society	
POLS 8201	Comparative Politics	
POLS 8301	International Politics	
POLS 8401	Introduction to Political Theory	3
<b>Methods Courses</b>		
CLA 8985	Teaching in Higher Education: Liberal Arts	3
POLS 8001	Political Statistics I	3
POLS 8002	Qualitative Research Methods	3
POLS 8003	Political Statistics II	3
<b>Electives</b> <sup>1</sup>		<b>18</b>
<b>Research Courses</b>		<b>6</b>
POLS 9994	Preliminary Examination Preparation	
POLS 9998	Pre-Dissertation Research	
POLS 9999	Dissertation Research <sup>2</sup>	
<b>Total Credit Hours</b>		<b>45</b>

1

Students select three elective courses in a first field, two elective courses in a second field, and one free elective. Elective courses in the two fields should be taken in areas in which the student plans to complete written comprehensive exams. The free elective may be taken in advanced methods or another substantive course. Taking more than two independent study courses requires the permission of the Graduate Chair.

2

Students must register for POLS 9999 while writing their dissertation to remain in good standing in the program unless they file for a leave of absence. Students usually register for 1 credit of POLS 9999 for every term they are writing the dissertation. Of the 6 required research credits, a minimum of 2 credits of POLS 9999 must be taken.

### Culminating Events:

#### *Qualifying Examinations:*

The Qualifying Examinations are given at the end of the Spring term for students in their second year of the PhD program. To be eligible to take the Qualifying Exams, students must have completed nearly all didactic coursework and have no incompletes on their transcript regardless of how many credits they have completed. In practice, all incompletes must be converted to a letter grade by the date on which the examinations take place.

Students take the PhD Qualifying Examinations in one of four fields: American Politics, Comparative Politics, International Relations and Political Theory. The field in which a student takes their Qualifying Examinations is considered their primary field of study. Examinations consist of a written component and are conducted by at least three faculty selected from the subfield by the Graduate Chair in consultation with the Subfield Coordinator. The examiners have joint responsibility for writing and grading the field examination. In this exam, students must demonstrate depth and breadth of knowledge and intellectual sophistication across their primary PhD field of study. They should also be prepared to interpret political phenomena within the context of various theories, use empirical data to illuminate concepts, and identify gaps in knowledge. Students are encouraged to meet with faculty in their field to discuss the general areas of the exam content to ensure that they have accurately identified key theories, concepts and literature. Professors may make sample questions, previous exams or special reading lists available as study aids.

Students who fail the written exam portion of the Qualifying Examinations can take a new version at the end of the summer after their second year in the PhD program. The Graduate School specifies that any student who fails all or part of these examinations twice is automatically dismissed from the program.

#### *Field Paper:*

In addition to the Qualifying Examinations in their primary field, students must also submit a field paper in their primary field of study. The field paper is a completed piece of research of publishable quality. It is intended to serve as a significant steppingstone toward the dissertation proposal and may build on papers written in previous courses. In the Spring term of a student's second year, the student enrolls in POLS 9994 and works with the course instructor and a member of the graduate faculty to generate a topic for the field paper. Field papers are due at the start of the Fall term of the student's third year. Papers are evaluated by the Qualifying Examinations committee in the relevant field. Students whose papers are deemed passing are invited to present their papers orally to the Qualifying Examinations committee within ten days of the

date of submission. Papers not approved by the Qualifying Examinations committee must be revised and resubmitted again before the end of the Fall term of the third year. Failure to complete a satisfactory field paper by the end of the exam period in the Fall term of the third year constitutes grounds for dismissal from the program.

*Seminar Paper:*

In lieu of a Qualifying Exam, students submit a seminar paper in their secondary field of study to the Qualifying Examinations committee in the relevant field. As part of their coursework, students must take the core seminar and two electives in their secondary field. All graduate elective courses give students the option of writing a seminar paper as a central element of the course grading. In one of these electives, students complete a seminar paper, which is graded as usual by the instructor of record, and turned in when students sit for their Qualifying Examinations in their primary field. The instructor of record in the course for which the seminar paper is written may require further revision before the paper is submitted to the Qualifying Examinations committee.

*Dissertation Proposal:*

In consultation with the Graduate Chair, the candidate secures a principal dissertation advisor. This person must be a member of the Political Science Graduate Faculty and specialize in the area of the dissertation topic. Preferably in the term immediately after passing the PhD Qualifying Exam, and no more than two terms thereafter, the candidate takes POLS 9998, the dissertation proposal preparation course. The course is offered every Fall under the guidance of the Graduate Chair. The purpose of the course is to launch students on writing their dissertation proposals and prepare them for writing the dissertation. Students are required to do the following:

1. Under the guidance of their advisor (or if different from the advisor, the faculty member most likely to supervise their dissertation) and Graduate Chair, begin exploring possible dissertation topics through research and reading.
2. Attend seminar meetings in the Fall term under the supervision of the Graduate Chair. At these sessions, the Graduate Chair presents information relevant to the development and preparation of dissertation proposals and chapters. Students are required to make presentations that address problems encountered in the proposal and dissertation writing process and strategies for overcoming them. Students who already have taken POLS 9998 are invited back to attend and participate in subsequent seminars and report on their progress and share their experiences with the students enrolled in the course.

In consultation with the dissertation advisor, the student assembles a Doctoral Advisory Committee. The Doctoral Advisory Committee is to be composed of at least three Temple Graduate Faculty, at least two of whom have their primary appointment in Political Science. The composition of the Doctoral Advisory Committee must be formally approved by the Graduate Chair. A student wishing to pursue a dissertation on a topic that requires supplementing the expertise of the department's faculty may have to seek a committee member from another department. The student has the burden of convincing the Graduate Chair that a committee with adequate expertise can be established with faculty willing to serve.

Students are required to submit a preliminary proposal not to exceed five double-spaced pages. The preliminary proposal should address both the question(s) to be examined and a justification for why those questions warrant a major study. Students are expected to show why these questions are or should be important to political scientists as well

as to citizens. Only after the Doctoral Advisory Committee is satisfied that the student has written a persuasive preliminary proposal will the student be permitted to write a longer proposal, if the committee believes a longer proposal is warranted.

Successful completion of POLS 9998 culminates in the defense of the dissertation prospectus before the Doctoral Advisory Committee. The dissertation prospectus, consisting of a research design and literature review, should be defended and accepted by the full membership of the committee within two terms after completion of PhD coursework. No student is awarded financial assistance who has not successfully defended a prospectus within a year of completion of coursework. Students who fail to submit an approved dissertation proposal within two years of completing their PhD coursework are subject to dismissal from the program. An approved proposal is a contract between the student and the Doctoral Advisory Committee. After approval, any significant theoretical or methodological change in the substantive direction of the project must be approved by the committee.

Once the prospectus is successfully defended, the student is advanced to candidacy. The Doctoral Advisory Committee must confer at least once a year with the student to review progress and provide advice. Students should take the initiative to schedule these exchanges and ensure that written faculty comments on the exchange be placed in their graduate file.

*Dissertation:*

A doctoral dissertation should demonstrate that the candidate can conduct scholarly research with a high level of professional competence. The dissertation should constitute a distinctive contribution to knowledge in Political Science. Normally, it should outline theoretical knowledge in some field of Political Science, propose a question or hypothesis that is linked to the theory, and provide empirical data to illuminate the theoretical issues in a convincing manner.

The Graduate School requires that students working on a dissertation register for POLS 9999 in order to maintain status as an active graduate student.

Students must submit final drafts of dissertations in an approved style and format. Not doing so may result in significant reformatting at the end. Information on the desired format can be found in the Dissertation and Thesis Handbook.

After the principal dissertation advisor and the Doctoral Advisory Committee have reviewed the completed dissertation draft, a fourth reader from outside the department who has not been involved with the dissertation previously must be selected by the dissertation committee chair and the Graduate Chair. Students may suggest a reader. This reader must be a Graduate Faculty member from another department at Temple or from another university who has the qualifications necessary to act as a fair judge of the dissertation's scholarly merit. As a member of the newly formed Dissertation Examining Committee, this reader should receive a completed draft of the dissertation one month before the anticipated dissertation defense date. Readers who are from outside of Temple University must submit a curriculum vitae and be approved by the Graduate School at least two weeks prior to the oral defense.

When a majority of the Dissertation Examining Committee has judged in writing that the dissertation is ready to be defended, a defense date can be scheduled. A defense is open to the university community and to the student's family. Others who wish to attend must obtain the written permission of the student and the Dissertation Examining Committee. The defense must be announced publicly at least 10 working days in

advance. Notice must be sent to all faculty members in the department and to the Graduate School. The public announcement of the defense should include an abstract of the dissertation.

The oral defense must be chaired by a member of the committee other than the dissertation advisor. The oral defense should demonstrate that:

- the dissertation is commensurate with the standards for original research in Political Science;
- the ethics and standards governing Political Science research have been followed;
- the research and appropriate methodology have been mastered; and
- the candidate has an understanding of the relationship of this work to the broader field in which it is lodged.

Passing the examination requires a vote of approval by more than half of the full membership of the Dissertation Examining Committee. If a dissertation is approved but revisions are required, the revisions must be submitted to the Graduate School in final form within 30 days of the defense. Otherwise, the defense is nullified and a new oral defense must be scheduled. After the final draft of the dissertation has been approved by the dissertation chair, it must be submitted to the Graduate Coordinator and to the Graduate School by uploading the final document to <https://www.etdadmin.com/cgi-bin/school?siteId=171>.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/political-science-phd-la-pols-phd>

### Department Information:

Dept. of Political Science  
408 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
215-204-7796

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

#### *Admissions:*

Anna Hunter  
Graduate Coordinator  
[annahunter@temple.edu](mailto:annahunter@temple.edu)  
215-204-7796

#### *Graduate Chairperson:*

Adam Ziegfeld, PhD  
[psgrad@temple.edu](mailto:psgrad@temple.edu)

#### *Chairperson:*

Mark Pollack, PhD  
[mark.pollack@temple.edu](mailto:mark.pollack@temple.edu)  
215-204-7709

# Psychological Research MS

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Science in Psychological Research.

## About the Program

The accelerated +1 MS in Psychological Research is designed to provide a research-intensive experience, advanced coursework and professional development to current Temple University students completing their undergraduate degree in Psychology who intend to pursue doctoral studies in any of the academic psychology disciplines. Students enter the program as senior psychology majors and complete the MS degree with only one additional year of graduate coursework. Students in the 32-credit program work with a faculty sponsor to develop and carry out a master's project; complete graduate-level coursework in methodology, statistics, ethics and topical seminars; and engage in professional development activities that prepare them for doctoral-level studies and enhance their applications to PhD programs.

The MS in Psychological Research is separate and distinct from the PhD program offered by the Department of Psychology and Neuroscience and does not lead to entrance into the Psychology PhD program. Prospective doctoral students must apply directly to the PhD program.

**Time Limit for Degree Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework.

**Job Prospects:** Graduates of the MS program in Psychological Research gain skills that enhance their applications to doctoral programs in academic psychology. Positions for individuals with an MS in Psychological Research are also available in a number of settings, including universities, private research and consulting organizations, nonprofits and marketing.

**Non-Matriculated Student Policy:** Master's Directed Research courses, including PSY 5791 Master's Directed Research I and PSY 5891 Master's Directed Research II, and 8000-level courses are not open to non-matriculated students. Permission of the instructor is required for non-matriculated students to take PSY 5003 Advanced Statistics and PSY 5104 Ethics and Ethical Conflicts in Psychological Science.

**Financing Opportunities:** Assistantships are not available for the MS program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

Applications are not evaluated until after the deadline has passed.

If you are currently an undergraduate student in Psychology at Temple University, *APPLY ONLINE to this graduate program*. The MS program in Psychological Research is open only as an accelerated +1 program for Psychology undergraduate students at Temple University. It is expected



that the program will open to non-Temple students in the future, but that time frame has not yet been determined.

#### Letters of Reference:

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree (BA, AB or BS) in Psychology is required. Additionally, a minimum GPA of 3.5 is required in both Psychology and overall for admissions consideration. Meeting the minimum does not, however, guarantee admission.

**Statement of Goals:** In approximately 500 to 1,000 words, state your reasons for pursuing a master's degree, current research interests, research experience, and future career goals.

#### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0
- PTE Academic: 72

**Writing Sample:** An academic writing sample must be submitted. It is used to assess the applicant's ability to complete graduate-level written work and produce a high-quality master's project paper.

## Program Requirements

#### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 32

Required Courses:

Year 1		
Fall		Credit Hours
PSY 5791	Master's Directed Research I	3
<b>Credit Hours</b>		<b>3</b>
Spring		
PSY 5003	Advanced Statistics	3
PSY 5891	Master's Directed Research II	3
<b>Credit Hours</b>		<b>6</b>
Year 2		
Fall		Credit Hours
PSY 8015	Teaching of Psychology	1
PSY 8016	Professional Development Seminar	2
PSY 9991	Research	4
8000-level Statistics or Methodology course		3
<b>Credit Hours</b>		<b>10</b>

Spring		
PSY 5104	Ethics and Ethical Conflicts in Psychological Science	3
PSY 9991	Research	4
8000-level Topical Seminar		3
Elective <sup>1</sup>		3
<b>Credit Hours</b>		<b>13</b>
<b>Total Credit Hours</b>		<b>32</b>

1

The elective must be a graduate course at the 5000 to 8000 level, but may be taken from any school or college.

**Other Requirement:** MS students are exposed to a broad range of current research by attending the department's Colloquium and TILES lecture series to hear talks by distinguished researchers from other universities. They are also required to participate in lab meetings and journal clubs, and to attend regular advising meetings to select and apply to appropriate doctoral programs. Students who postpone application to doctoral programs receive guidance for a master's-level job search and applications.

#### Culminating Event:

*Master's Project:*

A four-course sequence of directed research immerses the student in carefully planned and executed research, culminating in a publishable paper. Throughout the sequence, students are expected to participate in and contribute to the advisor's program of research. Activities include data analyses, literature reviews, programming experiments and/or recruitment.

- During the first term, students work with their advisors to develop a research proposal and analysis plan for the master's project. A protocol is submitted to the Institutional Review Board (IRB) for approval. Students become familiar with the methods, measures and apparatus in the advisor's lab.
- During the second term, students begin data collection for the master's project and start work on a comprehensive literature review.
- The third term focuses on continued data collection, preliminary analyses, completion of the literature review, and a possible poster submission.
- During the fourth term, data collection, cleaning and analyses are completed, and the results are written up in an APA manuscript.

All students complete the master's project and submit their research for publication and/or presentation at a conference. Students who do not complete the final project requirement by the end of the Spring term of Year 2 may register for additional research credits in the Summer term and submit their master's project no later than July 15 to be eligible for August graduation.

## Contacts

#### Program Web Address:

<https://www.temple.edu/academics/degree-programs/psychological-research-ms-la-psyr-ms>

#### Department Information:

Dept. of Psychology and Neuroscience  
653 Weiss Hall

1701 N. 13th Street  
Philadelphia, PA 19122-6085  
tuk53856@temple.edu  
215-204-7321

## Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

## Department Contacts:

### Admissions:

Sandra Sepulveda-Kozakowski, PhD  
tuk53856@temple.edu

### Director of Graduate Studies:

Dr. Lisa Briand  
psydgs@temple.edu  
215-204-7311

### Chairperson:

Peter Marshall, PhD  
peter.marshall@temple.edu  
215-204-7630

# Psychology MA

COLLEGE OF LIBERAL ARTS

## About the Program

This program is *not open for direct admission*. The Master of Arts in Psychology is awarded to students enrolled in the Doctor of Philosophy (PhD) program in Psychology en route to completion of their doctoral degree. Students must successfully complete 30 credits of required coursework.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 30

To be revealed...

# Psychology PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Psychology.

## About the Program

The Psychology program offers advanced study leading to the doctoral degree. Training is directed toward excellence in scholarship, research, teaching and practical applications. The focus of the Psychology PhD program varies depending on the area of specialization into which the student enters.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework.

**Ranking:** The program has been consistently ranked among the very best Psychology doctoral programs.

**Accreditation:** The American Psychological Association and Psychological Clinical Science Accreditation System have accredited the Clinical Psychology area of specialization. Other areas of specialization do not undergo accreditation.

**Areas of Specialization:** The four areas of specialization include:

- Clinical Psychology
- Cognition and Neuroscience
- Developmental Psychology
- Social Psychology

**Job Prospects:** The program is dedicated to producing well-trained psychologists with the PhD who work in academic, applied and industry settings.

**Licensure/Certification:** The field of Clinical Psychology requires licensure for its practice.

**Non-Matriculated Student Policy:** The permission of the instructor is required for non-matriculated students to take PhD courses. The exception is 8000-level courses, which are not open to non-matriculated students.

**Financing Opportunities:** Both Teaching and Research Assistantships carry a stipend, full tuition remission (up to 12 credits per term depending on year and specialization), and health insurance benefits. The principal duties of a Teaching Assistant (TA) include assisting faculty members in classroom (field and observatory) instruction, conducting tutorials and discussion sections, and grading. A Research Assistant (RA) is expected to devote 20 hours per week on average to research obligations. An RA is assigned to a faculty member or principal investigator who is working on a specific research project.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Admission Only:*

- November 15 – Clinical Psychology
- December 1 – Cognition and Neuroscience, Developmental Psychology, and Social Psychology

Applications are not evaluated until after the deadline has passed.

All applicants to the Psychology PhD program must apply through the online application for the College of Liberal Arts at Temple University.

Fee waivers are available on a first-come, first-served basis for applicants who identify as members of groups underrepresented in academia or who meet NIH guidelines for socioeconomically disadvantaged students. Applicants should complete the application up to the point of payment and then fill out the waiver request form found at <https://forms.gle/ZEWQHSn12Q7HqdYD8>. Please address any questions about the process by emailing [psych\\_fee\\_waivers@temple.edu](mailto:psych_fee_waivers@temple.edu).

**Letters of Reference:**

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members and/or employers familiar with the applicant's academic competence.

**Coursework Required for Admission Consideration:** Applicants to the doctoral program must hold a BA or BS degree and have completed at least four 3-credit courses in Psychology, a statistics course, and one laboratory course in the sciences. A natural sciences laboratory course is also recommended.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Psychology is strongly recommended. Depending on the area of interest, a bachelor's degree in a biology-related discipline may be appropriate.

**Statement of Goals:** In approximately 500 to 1,000 words, state your interest in Temple's program and outline your research goals, future career goals, and academic and research achievements. This statement should also identify your first, second and third choice of faculty with whom you are applying to work. If your choice of potential faculty mentor is not included, your application may not receive full review.

#### Standardized Test Scores:

GRE General Test: Optional. Scores may be submitted if available. Note that if applying for the Clinical Psychology area, GRE scores will not be considered in admissions decisions. Applications for the Cognition and Neuroscience, Developmental Psychology, and Social Psychology areas will receive equal consideration with or without GRE scores.

GRE Subject Test in Psychology: Not required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0
- PTE Academic: 72

**Advanced Standing:** A student enrolled in the Psychology PhD program may, with the approval of the Director of Graduate Studies in Psychology, transfer as many as 9 credits of coursework taken elsewhere. To be so approved, the courses must be deemed appropriate to stand as part of the student's training in the PhD program, and the student must have received a grade of "B" or higher in the course(s). Final approval of advanced standing credits is given by the Office of the Dean, College of Liberal Arts, on recommendation from the Director of Graduate Studies in Psychology. The maximum number of advanced standing credits awarded is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 32-68, depending on area of specialization<sup>1</sup>:

Code	Title	Credit Hours
	Clinical Psychology	68
	Cognition and Neuroscience <sup>2</sup>	32
	Developmental Psychology <sup>2</sup>	32
	Social Psychology <sup>2</sup>	32

<sup>1</sup>

For greater detail on requirements by area of specialization, consult the Department of Psychology and Neuroscience Graduate Handbook, found at [https://docs.google.com/document/d/1hoxVN1o1ZGB10\\_9N0k8yVxkRDJLcMVYGTp-Nwgbm94/edit](https://docs.google.com/document/d/1hoxVN1o1ZGB10_9N0k8yVxkRDJLcMVYGTp-Nwgbm94/edit).

<sup>2</sup>

39 credits required with the Neuroscience specialization.

*Required Courses:*

## Area of Specialization in Clinical Psychology

Code	Title	Credit Hours
<b>Core Courses</b>		
PSY 8011	Graduate Statistics I <sup>1</sup>	3
PSY 8015	Teaching of Psychology	0
PSY 8017	Professional Issues for Psychology Careers	0
PSY 8021	Graduate Statistics II <sup>1</sup>	3
PSY 8410	Multicultural Issues in Clinical Psychology	3
PSY 8411	Cognitive-Behavioral Therapies	3
PSY 8412	Core Course in Psychopathology	3
PSY 8413	Psychological Assessment I	3
PSY 8423	Psychological Assessment II	3
PSY 8433	Clinical Psychology: Scientific and Professional Dimensions	3
PSY 8481	Social, Cognitive, and Developmental Aspects of Behavior	3
PSY 9187	Clinical Practicum <sup>2</sup>	3
PSY 9287	Clinical Practicum <sup>2</sup>	3
PSY 9387	Clinical Practicum <sup>2</sup>	3
PSY 9411	Clinical Research Methodology	3
PSY 9485	Ph.D. Internship Course	2
PSY 9487	Clinical Practicum <sup>2</sup>	3
PSY 9987	Assessment Practicum	6
	Bio-integrative Course <sup>3</sup>	3
<b>Electives</b>		
	Clinical Elective	3
	General Electives	6
<b>Research Courses <sup>4</sup></b>		
	PSY 9994 Preliminary Examination Preparation	
	PSY 9998 Pre-Dissertation Research	
	PSY 9999 Ph.D. Dissertation Research	
<b>Total Credit Hours</b>		<b>68</b>

<sup>1</sup>

Two terms of graduate coursework in Statistics must be successfully completed in the first year of study.

2

Students must complete 12 credits of Clinical Practicum, including PSY 9187, PSY 9287, PSY 9387, and PSY 9487.

3

The bio-integrative course is selected from the departmental list of approved courses.

4

A minimum of 6 credits is required, with at least 2 of the 6 credits required to be in PSY 9999. The remaining 4 credits can be taken in any combination of PSY 9994, PSY 9998, and PSY 9999. At least one credit of PSY 9999 must be taken in the academic term or summer session of graduation.

## Areas of Specialization in Cognition and Neuroscience, Developmental Psychology, and Social Psychology

Code	Title	Credit Hours
<b>Core Courses</b>		
PSY 8011	Graduate Statistics I <sup>1</sup>	3
PSY 8015	Teaching of Psychology	1
PSY 8017	Professional Issues for Psychology Careers	1
PSY 8021	Graduate Statistics II <sup>1</sup>	3
<b>Electives and Topical Seminars</b>		<b>18</b>
<b>Research Courses <sup>2</sup></b>		<b>6</b>
PSY 9994	Preliminary Examination Preparation	
PSY 9998	Pre-Dissertation Research	
PSY 9999	Ph.D. Dissertation Research	
<b>Total Credit Hours</b>		<b>32</b>

1

Two terms of graduate coursework in Statistics must be successfully completed in the first year of study.

2

A minimum of 6 credits is required, with at least 2 of the 6 credits required to be in PSY 9999. The remaining 4 credits can be taken in any combination of PSY 9994, PSY 9998, and PSY 9999. At least one credit of PSY 9999 must be taken in the academic term or summer session of graduation.

## Optional Concentration in Quantitative Methods

*Number of Credits Required to Complete the Optional Concentration: 3*

Code	Title	Credit Hours
<b>Coursework taken as part of the Psychology PhD</b>		
PSY 8011	Graduate Statistics I	
PSY 8021	Graduate Statistics II	
Two Advanced Multivariate Methods courses <sup>1</sup>		
<b>Coursework required outside of the Psychology PhD <sup>2</sup></b>		
PSY 8031	Survey of Multivariate Techniques	3
<b>Total Credit Hours</b>		<b>3</b>

1

To complete this requirement, students opt to take PSY 8032 Structural Equation Modeling and PSY 8033 Hierarchical Linear Modeling in lieu of elective or seminar courses required for the Psychology PhD. With the permission of the Graduate Director, an advanced statistics course may be selected instead of PSY 8033.

2

In addition, students are required to demonstrate the ability to teach statistics. This is done by serving as the: (a) primary instructor for an undergraduate-level statistics course, such as Introductory Statistics; (b) instructor of a recitation section for undergraduate statistics; or (c) teaching assistant for a statistics course at the graduate level. Alternately, students may present a cumulative total of 9 to 12 hours of workshop material on statistics in multiple workshops on the same or different statistical topics for the Department of Psychology and Neuroscience. At least three hours should be didactic, with the remaining hours in consulting. Students prepare a plan to address these hours. Note that serving as a grader for a statistics course is insufficient for satisfying the teaching requirement for this concentration.

**Internship:** An internship is required for the Clinical Psychology area of specialization.

### Culminating Events:

#### *Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge in a specialized area of Psychology. The exam should be modeled after published literature reviews in the field and evaluated by the criteria applied to reviews that are submitted for publication to scholarly journals. The examination evaluates the student's ability to apply specific research foci to anticipated problems in Psychology. The student must demonstrate a high level of oral and written competency in reviewing, synthesizing and evaluating an important topic in the field of Psychology.

The preliminary examination is generally completed by the end of the third year of study. The subject areas are determined, in advance, by the student and the Doctoral Advisory Committee. The Doctoral Advisory Committee must include at least three Graduate Faculty members from Temple's Department of Psychology and Neuroscience. The committee may be expanded to include other Temple Presidential faculty (from inside or outside the department) and/or doctorally prepared experts from outside the University, provided that a majority of the members of the committee are members of Temple's Graduate Faculty. The Doctoral Advisory Committee evaluates the examination. Each member votes to pass or fail the student. In order to pass, a majority of the committee members must agree that the exam has been satisfactorily completed. The examination is defended orally following an evaluation of the written document.

Students who are preparing to write their preliminary examinations should confirm a time and date with the Chair of the Doctoral Advisory Committee and notify all members of their training program.

#### *Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of the following:

1. the context and background surrounding a particular research problem;

2. an exhaustive survey and review of literature related to the problem; and
3. a detailed methodological plan for investigating the problem.

The Doctoral Advisory Committee evaluates and approves the proposal or requests modifications by the student.

*Dissertation:*

The doctoral dissertation is an original empirical study that makes a significant contribution to the field of Psychology. It should expand the existing knowledge and demonstrate both the student's grasp of research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of Psychology; and be prepared for publication in a professional journal.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee consists of the Doctoral Advisory Committee plus at least three additional doctorally prepared individuals. The majority of the individuals on the Committee must be members of the Temple University Graduate Faculty. The Dissertation Examining Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of either the Doctoral Advisory Committee or the Dissertation Examining Committee, the new member must be approved by the Departmental Chair and registered with the department's Graduate Secretary and the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Secretary at least 15 days before the defense is to be scheduled. The Graduate Secretary arranges the time, date and room within two working days, and forwards to the student the appropriate forms.

After the Graduate Secretary has scheduled the defense, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 working days before the defense. The department posts announcements of the defense, and the Graduate School lists the defense on its website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/psychology-phd-la-psy-phd>

### Department Information:

Dept. of Psychology and Neuroscience  
Weiss Hall  
1701 N. 13th Street  
Philadelphia, PA 19122-6085  
[psychology@temple.edu](mailto:psychology@temple.edu)  
215-204-7321

## Submission Address for Application Materials:

<https://apply.temple.edu/CLAV>

### Department Contacts:

*Clinical Psychology Admissions Director:*

Dr. Lauren Alloy  
[lalloy@temple.edu](mailto:lalloy@temple.edu)

*Cognition and Neuroscience Admissions Director:*

Dr. Thomas F. Shipley  
[tshipley@temple.edu](mailto:tshipley@temple.edu)

*Developmental Psychology Director:*

Dr. Elizabeth Gunderson  
[elizabeth.gunderson@temple.edu](mailto:elizabeth.gunderson@temple.edu)

*Social Psychology Director:*

Dr. Ingrid Olson  
[iolson@temple.edu](mailto:iolson@temple.edu)

*Associate Chair:*

Dr. Peter James  
[pjames@temple.edu](mailto:pjames@temple.edu)  
215-204-2714

*Director of Graduate Studies:*

Dr. Lisa Briand  
[psydgs@temple.edu](mailto:psydgs@temple.edu)  
215-204-7311

*Chairperson:*

Dr. Peter Marshall  
[peter.marshall@temple.edu](mailto:peter.marshall@temple.edu)  
215-204-7360

## Public Policy MPP

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Public Policy.

### About the Program

The Master of Public Policy (MPP) degree provides training for individuals who seek careers in the public sector or in private and nonprofit organizations that work on a continuous basis with government agencies. The MPP curriculum is designed to provide students with the technical and analytical skills to be able to develop and assess proposed public policies and evaluate the effectiveness of programs and activities that governments at the federal, state and local levels undertake. The MPP also develops students' appreciation for the political and institutional contexts in which issues reach the policy agenda and policies are formulated, adopted, implemented and evaluated.

**Time Limit for Degree Completion:** 3 years; part-time students may apply for extensions, if needed

**Campus Location:** Center City for in-person instruction or Online with a combination of asynchronous and synchronous evening components

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 5:00 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Courses are taken in Economics, Geography and Urban Studies, Political Science and other disciplines as needed. Students may also pursue the MPP as a dual degree with the Master of Public Health (MPH). Applicants for the dual degree must apply to each program separately and should consult the MPP website for further details.

**Areas of Specialization:** Students use their electives to specialize in a specific policy area or skill set.

**Job Prospects:** Students in the MPP program plan to seek entry-level jobs in government agencies as civil servants or in private and nonprofit organizations that work with federal, state and local governments, or may already have experience in government, private or nonprofit organizations and seek training and credentials to further develop their careers.

**Non-Matriculated Student Policy:** Prior to applying for admission, students sometimes want to take courses as non-degree students. Students are permitted to take up to 9 credits on a non-matriculated basis. If admitted to the program, students may have that coursework, with a grade of "B" or better, apply toward the MPP degree. Individuals who wish to take courses as non-matriculated students must first obtain the approval of the Director of the MPP program to determine if the individual stands a reasonable chance for admission to the program. Next, the prospective student must visit the Office of Continuing Studies with transcripts from all institutions attended, including the one that conferred the undergraduate degree, to be enrolled in the coursework.

**Financing Opportunities:** MPP students are not eligible for departmental assistantships, but may apply for a limited number of partial scholarships available from the program.

## Admission Requirements and Deadlines

### Application Deadline:

#### Fall:

- March 1 – Application and Scholarship Deadline
- April 15 – Late Application Deadline
- June 15 – Final Application Deadline

#### Spring:

- November 1 – Application Deadline
- December 6 – Late Application Deadline

Applications are processed as they are received. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.* Whether delivered in person or online, curricula, admissions requirements and deadlines are the same for the Master of Public Policy program. In the application portal, applicants interested in the in-person MPP program should select "Master of Public Policy" from the drop-down menu, while those applying for the online MPP should select "Online MPP."

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence. For applicants with extensive administrative experience, two of the letters may come from supervisors or colleagues in the agency or organization where the applicant has been employed. Letters must be on official letterhead or include the recommender's full contact information: mailing address, phone and email.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. A minimum GPA of 3.0 in undergraduate work is expected for consideration of the application to the program.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program, future career goals, and academic and work experience.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

**Transfer Credit:** Graduate coursework in public policy or public administration may be transferred from outside the University, provided that the credits were obtained no more than five years prior to the student's matriculation at Temple; the grades are "B" or better; and the course(s) for transfer are equivalent to those in Temple's curriculum. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
ECON 5102	Economic Decisions and Public Policy	3
GUS 5165	Community Based Program Evaluation	3
PLCY 8001	Statistics for Public Policy	3
PLCY 8118	The Policy-Making Process	3
PLCY 8119	Policy Analysis	3
PLCY 8123	Bureaucracy and Public Management	3
PLCY 8127	Public Policy Project	3
PLCY 8128	State and Local Budgeting	3
<b>Electives</b>		<b>9</b>
<b>Internship</b>		
PLCY 5085	Internship in Public Policy	3
<b>Total Credit Hours</b>		<b>36</b>

1

Students who matriculate into the in-person MPP program are permitted to take up to 6 credits of required core coursework online, excluding PLCY 8127. Requests to take required courses online must be approved in writing on a case-by-case basis.

#### **Culminating Event:**

##### *Seminar Paper:*

The Public Policy Project, completed in PLCY 8127, is undertaken in the student's last term in the MPP program. Students produce an original, full-length policy analysis for a client. Students attend a weekly seminar to report on their progress at each stage in the development of their policy analysis, receive feedback from other seminar participants, and provide advice to other students in the seminar.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/public-policy-mpp-la-ppol-mpp>

### **Department Information:**

Public Policy Program  
837 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6089  
mpp@temple.edu  
215-204-7817

### **Submission Address for Application Materials:**

<https://apply.temple.edu/CLA/>

### **Department Contacts:**

#### *Admissions:*

Gary Mucciaroni, PhD  
Director, MPP Program  
mpp@temple.edu  
215-204-6195

Samantha Apgar  
Assistant Director, MPP Program  
samantha.apgar@temple.edu  
215-204-7817

## **Religion MA**

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Religion.

### **About the Program**

The Department of Religion at Temple University offers a 30-credit master's program. For those seeking to qualify for the PhD program at Temple University or other leading universities, it offers intensive training in research methods and in special fields of concentration in religion studies. Note, however, that admission to the Temple PhD program requires a separate application and the completion of qualifying examinations not required for the MA degree.

For those who plan to teach religious studies in community colleges or high schools, the MA degree provides advanced training in methods of research and in-depth study of the world's major religious traditions. For those in various forms of religious ministry, it offers post-graduate training and exposure to the newest research methods and developments for use in understanding their own or other religious and cultural traditions. For those who wish to bring cultural and cross-cultural analytical tools to professions such as business, government, journalism, medicine and social work, the MA degree provides additional training in research methods and graduate-level study in the major world religious and cultural traditions. For qualified persons in the general public, it allows the opportunity to acquire competence in the study of religions, values and cultures broadly defined, and in areas of special interest to the student.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** The MA program offers two areas of concentration, each of which allows students to choose between the Thesis Option and the Portfolio Option:

- Religion, Values and Global Cultures, which is built around our Foundations seminars in the world's religious traditions and advanced seminars that permit further study in various Western and Asian religious and values traditions. Courses in the other track may be taken if they draw on materials from one of these religious traditions.
- Religion, Values and Public Life, which is built around our Foundations seminars in the historical, philosophical and social-science methods of study in the field of Religion, together with advanced seminars in various areas of the interaction of religion and values in public life, such as interfaith dialogue, race/gender/sexuality and religion, religion and ethics, and religion and the political process. Students taking courses in this concentration may also take courses on related topics in world religions.

Upon entering the program, students choose their area of concentration. While admission requirements and procedures are identical, requirements for the degree vary.

**Job Prospects:** The master's degree at Temple University is viewed as enhancement of knowledge about religion for those already employed in various professional capacities or as the foundation for pursuit of a PhD degree.

**Non-Matriculated Student Policy:** Non-matriculated students may complete three graduate courses before being admitted into the degree program. Credit toward a subsequent degree program at Temple University is limited to 9 credits.

**Financing Opportunities:** University Fellowships, Graduate Assistantships, and Academic Internships are ordinarily reserved for PhD students.

## **Admission Requirements and Deadlines**

### **Application Deadline:**

*Fall:* January 15

Applications are evaluated together after the deadline.

APPLY ONLINE to this graduate program.

**Letters of Reference:**

Number Required: 3

*From Whom:* Recommendations should be obtained from former instructors or academic persons who know the applicant best.

**Coursework Required for Admission Consideration:** Applicants are invited to consult with the Graduate Director regarding specific academic preparation.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, with a degree earned in a Liberal Arts discipline preferred. Applicants with no Liberal Arts background should consult with the Graduate Director.

**Statement of Goals:** In 2 to 3 pages, describe your background and specific interests and reasons for pursuing an MA in Religion, demonstrating knowledge of the scope and limits of the Department of Religion's offerings and outlook.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available. The GRE is waived for international students whose native language is not English, but the minimum TOEFL must be achieved and reported.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should be no more than 10 pages in length and fully referenced according to a professional, scholarly style manual. It should be in the field of Religious Studies or a closely related area.

**Transfer Credit:** Courses taken at an accredited institution that are compatible with the offerings at Temple's Department of Religion and graded "B" or better are eligible for transfer credit. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
	Foundations Courses	12
	Advanced Seminars and/or Independent Study	12
	Additional Courses <sup>1</sup>	6
<b>Total Credit Hours</b>		<b>30</b>

1

Students can take 3 to 6 credits of coursework outside the Department of Religion in a cognate field at Temple University.

**Language Examination:** Reading knowledge of a language relevant to the area of focus is required. However, at the discretion of the student's supervisory committee, this requirement can be waived for those who are planning to do graduate work that does not require foreign language proficiency.

**Culminating Event:** No later than upon completion of their first 18 credits of coursework in either the Religion, Values and Global Cultures concentration or the Religion, Values and Public Life concentration, the student must choose either the thesis or portfolio option:

- The Thesis Option is recommended for, but not limited to, students intending to apply to a doctoral program or planning to teach at the college level. Six credits must be taken in a 3-credit Independent Study that prepares the student to register the following term for a 3-credit MA thesis project under the direction of a thesis advisor. Reading knowledge of a language relevant to the thesis topic and oral defense of the thesis are required.
- The Portfolio Option is recommended for students to augment their primary area of experience and professional training in fields other than Religion.

Upon choosing an option, the student then selects an advisor for the final project who has primary responsibility for supervising the student's work for the remainder of the program and is the primary reader of the thesis or portfolio. This choice must be approved by the Graduate Studies Committee.

*Thesis:*

For the Thesis Option, a thesis is required.

Note that the Portfolio Option requires successful completion of coursework.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/religion-ma-la-rel-ma>

### Department Information:

Dept. of Religion  
611 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
religiongradstudies@temple.edu  
215-204-3663

### Submission Address for Application Materials:

<https://apply.temple.edu/CLAV>

### Department Contacts:

*Admissions:*

Irina Segal  
irina.kasharsky@temple.edu



215-204-1742

*Graduate Chairperson:*  
Douglas Duckworth, PhD  
duckworth@temple.edu

*Chairperson:*  
Khalid Blankinship, PhD  
kblankin@temple.edu  
215-204-5543

## Religion PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Religion.

### About the Program

The Temple University Department of Religion began shortly after the Supreme Court declared that the study of religion (not to be confused with its practice) in state-supported public education was commended. Temple's department broke from the "seminary model" of traditional fields, such as church history and theology, and instead committed to the multi-traditional and multi-disciplinary study of global religious traditions. This gives our program an outstanding breadth and cross-cultural diversity. We have a long history of attracting students from all over the world, and our graduates now work in universities not just in North America, but also in places such as Germany, Japan, Korea and Malaysia.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main chiefly for day classes, with an increasing number of evening courses offered at TUCC in Center City

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Students are given a broad, interdisciplinary introduction to Religion in Unit I study and take courses in other departments and institutions in Unit II study. For details, see the Program Requirements.

**Affiliation(s):** Graduate student exchange agreements exist with the University of Pennsylvania's Department of Religious Studies; the Reconstructionist Rabbinical College; Palmer Theological Seminary, formerly the Eastern Baptist Theological Seminary; and the Lutheran Theological Seminary in Philadelphia. In addition, a coordinated MA/PhD program in Islamic-Christian Relations is conducted with Hartford International University for Religion and Peace, formerly the Hartford Theological Seminary, while a graduate certificate in Gender, Sexuality and Women's Studies is offered in cooperation with Temple's Women's Studies Program.

**Areas of Specialization:** The Department of Religion offers graduate programs leading to the MA and PhD degrees. Students are introduced to the major methods of study in Religion, with stress on the critical analysis of religions by the methods of the humanities and the social sciences, including textual and historical analysis, philosophical and hermeneutical studies, and social and cultural analysis. The program thus ensures that a well-rounded course of study is achieved. The two basic concentrations are:

- Global Religious Traditions, with emphasis in Asian Philosophy/Religious Thought, Biblical Studies, and Islam
- Religion and Society

**Job Prospects:** The kind of education we offer has enabled our graduates to find jobs in a very competitive job market. For example, some of our graduates in the area of Bible study were hired explicitly because they had received some instruction in Islam and could serve as a resource about that tradition. Breadth and diversity constitute one of the strengths of our program, and we continue to offer coursework in global religious traditions and the roles of religions in society and culture so as to maintain this strength. Graduates of our doctoral program are employed in colleges and universities in North America, Europe, Africa and Asia. The most common positions are as faculty in religion studies, although some are administrators in educational governmental administrations and academic administrations.

**Non-Matriculated Student Policy:** Persons not enrolled in a degree program may register for courses as non-matriculated students. Transcripts of undergraduate work should indicate some background in Religion Studies and a GPA sufficient to maintain graduate work, normally 3.5 or above. Non-matriculated students may register for courses after an interview with the Director of Graduate Religion Studies, at which time they should present academic transcripts. Credit earned toward a subsequent degree program at Temple University is limited to 9 credits.

**Financing Opportunities:** Teaching Assistants teach sections independently in the Department of Religion.

### Admission Requirements and Deadlines

#### Application Deadline:

This program is not accepting applications for the 2023-2024 academic year.

#### Letters of Reference:

*Number Required:* 3

*From Whom:* Recommendations should be obtained from former faculty who know the applicant best.

**Coursework Required for Admission Consideration:** It is suggested that applicants have taken at least 18 credits of Religion coursework.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In 2 to 3 pages, address your background that prepares you for graduate studies in Religion, including previous successes in academic study and research in the field; area of interest within the field of Religion and how that interest coincides with offerings in Temple's Department of Religion; and teaching and research goals and how you foresee study at Temple furthering those goals.

#### Standardized Test Scores:

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the

exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

**Writing Sample:** The writing sample should demonstrate your ability to research and write a scholarly paper. The paper should be no more than 10 pages in length and fully referenced according to a professional, scholarly style manual. It should be in the field of Religious Studies or a closely related area.

**Advanced Standing:** With the approval of the Director of Graduate Studies, students who have earned graduate credit at another institution can transfer up to 24 credits toward the coursework required for the PhD. A grade of "B" or higher must have been earned.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the PhD:* 51, including 30 credits at the master's level and 21 at the doctoral level

*Required Courses:*

Code	Title	Credit Hours
<b>Didactic Courses</b> <sup>1</sup>		
5000-, 8000-, and/or a maximum of 12 credits of 9000-level courses in the student's area of concentration		45
<b>Research Courses</b> <sup>2</sup>		
REL 9994	Preliminary Examination Preparation	6
REL 9998	Pre-Dissertation Research	
REL 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>51</b>

<sup>1</sup>

Six credits of coursework are taken outside of one's primary research area and may, optionally, be taken outside of the Department of Religion.

<sup>2</sup>

Of the 6 required research credits, a minimum of 2 credits of REL 9999 must be taken. The other 4 credits may be taken in any combination of REL 9994, REL 9998, and REL 9999.

**Language Examination:** Competence in all languages necessary to perform graduate-level scholarly research in the student's area of concentration must be demonstrated. Reading knowledge of a minimum of two foreign languages is required. Prior to taking the preliminary exam, students must successfully pass two research language examinations determined by their primary advisor or the Director of Graduate Studies.

### Culminating Events:

*Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge in specialized areas of Religion. Students are examined in all areas of scholarship and research necessary for their

area of study. They must have demonstrated reading knowledge of two foreign languages. They prepare a dissertation proposal and an outline of their areas of examination. The preliminary examination is taken once all coursework is complete.

All students may petition for and take their preliminary examination in four areas as early as the second term of their third year but must petition for and complete the preliminary exam by the end of their fourth year. Members of the student's dissertation committee individually write examination questions. Sometimes faculty are included as "examiners" who will not serve on the Dissertation Committee. Students arrange with their Dissertation Committee when the exams are to be taken. Normally exams are done within the Department of Religion, using a computer under supervised conditions. All examiners and members of the Dissertation Committee must agree that the student has demonstrated competence in the relevant areas of study, and that the student is capable of completing the dissertation proposed.

The written exams serve as the basis for the oral preliminary examination. All faculty for whom exams were written participate in the oral preliminary exam.

*Dissertation Proposal:*

The proposal demonstrates the student's knowledge of the current research in the field on their particular problem of interest. Students should show methodological awareness and state the uniqueness of the proposed research with regard to the ongoing body of scholarly literature.

*Dissertation:*

The dissertation is to demonstrate original and significant contributions to the study of Religion. It should make use of primary texts and demonstrate reading knowledge of appropriate original languages.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least one additional Graduate Faculty member from outside the Department of Religion. The Outside Examiner should be identified no later than the beginning of the term in which the student will defend the dissertation. The Dissertation Examining Committee evaluates the student's written thesis in making an original scholarly contribution to the field and their ability to defend and discuss orally the contents of the thesis.

If a student needs to change a member of a Committee, the new member must be approved by the Department's Graduate Studies Committee and registered with the Graduate Secretary and the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the Graduate Secretary at least 30 days before the defense is to occur. The Graduate Secretary arranges the time, date and room, and forwards to the student the appropriate forms. After the Graduate Secretary has scheduled the defense, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense. The department posts flyers announcing the defense.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/religion-phd-la-rel-phd>

## Department Information:

Dept. of Religion  
611 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
religiongradstudies@temple.edu  
215-204-3663

## Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

## Department Contacts:

### Admissions:

Irina Segal  
irina.kasharsky@temple.edu  
215-204-1742

### Graduate Chairperson:

Douglas Duckworth, PhD  
duckworth@temple.edu

### Chairperson:

Khalid Blankinship PhD  
kblankin@temple.edu  
215-204-5543

# Sociology MA

COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Sociology.

## About the Program

The graduate program in Sociology is devoted to the training of research scholars and educators in the discipline. Students have a variety of career goals, ranging from academic research and teaching to research and administration in private or public agencies. The master's program provides advanced training in sociological theory, statistics and research methods. The program's main areas of graduate teaching and research are Gender and Sexuality, Immigration and Globalization, Medical Sociology, Race and Ethnicity, and Urban Sociology.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages students to participate in seminars in other social sciences, including Anthropology, Criminal Justice, Geography and Urban Studies, History, Political Science, Psychology, Urban Education, and Women's Studies. A dual degree program is also currently offered:

- MA in Sociology/MA in Urban Bioethics with the Lewis Katz School of Medicine at Temple University

**Affiliation(s):** The program is affiliated with the American Sociological Association (ASA).

**Areas of Specialization:** The main areas of graduate teaching and research are:

- Gender and Sexuality
- Immigration and Globalization
- Medical Sociology
- Race and Ethnicity
- Urban Sociology

**Job Prospects:** Graduates of the MA program are typically employed as applied researchers and administrators in private and public agencies.

**Non-Matriculated Student Policy:** Students with a bachelor's degree may take graduate courses in Sociology without enrolling in a Temple University graduate program. A limit of 9 credits of graduate coursework taken prior to admission will be accepted toward a Sociology degree. Non-matriculated students should consult with the Graduate Chair before selecting their coursework if they plan to apply for the degree program.

**Financing Opportunities:** The Sociology Department does not offer funding opportunities for students enrolled in the MA program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

Applications are evaluated together after the deadline has passed.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence, wherever possible.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68
- Duolingo: 120

**Resume:** Current personal resume or curriculum vitae required.

**Writing Sample:** The writing sample should demonstrate your ability to conduct research and write a scholarly paper. The paper may be on any

topic. It must be fully referenced according to a professional and scholarly style.

**Transfer Credit:** Graduate coursework in Sociology may be transferred from outside the university, provided that the credits were obtained no more than five years prior to the student's matriculation at Temple and the grades are "B" or better. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31

*Required Courses:*

Code	Title	Credit Hours
<b>Social Theory Course</b>		
SOC 8111	Classical Social Theory	3
or SOC 9111	Contemporary Sociological Theory	
<b>Methods of Inquiry Courses</b>		
SOC 8011	Logic of Inquiry	3
SOC 8211	Inferential and Multivariate Statistics	4
SOC 8221	Qualitative Methods	3
SOC 9211	Graduate Data Analysis	3
SOC 9241	Qualitative Data Analysis	3
<b>Electives</b> <sup>1</sup>		<b>9</b>
<b>Capstone Courses</b> <sup>2</sup>		
SOC 8873	Writing for the Social Sciences	3
SOC 8883	Second-Year Research	0
<b>Total Credit Hours</b>		<b>31</b>

1

Electives may include: (1) SOC 9382 Independent Study Program: With the consent of the Graduate Chair and the instructor, students may take one Independent Study course, which is an intensive program of study within a specific area of Sociology. Students who wish to take an Independent Study course must submit to the Graduate Chair at the beginning of the term a "Department Independent Study Request" form describing the readings and/or research they propose to undertake.

The form must be signed by both the participating faculty member and the Graduate Chair. A final statement on the work completed must be filed with the Graduate Chair at the end of the term. A letter grade is given for this course. (2) An outside course: With the approval of the Graduate Chair, students may take one course outside of the Sociology Department. (3) SOC 9385 Internship in Social Research: With the consent of the Graduate Chair, students may undertake an internship for course credit, provided the internship unites the core concepts of sociology with professional organizational settings and the community as a whole. Students who wish to complete an internship must submit to the Graduate Chair at the beginning of the term an "Internship Request Form" describing the duties, frequency of service and major outcomes. The form must be signed by both the supervisor of the internship and the Graduate Chair.

2

SOC 8873 and SOC 8883 are taken concurrently.

**Culminating Events:** The Sociology Department evaluates students at the end of their second year based on two criteria:

- First, full-time students are expected to complete a Second Year Paper, which is due at the end of the Spring term of their second year. Part-time students are allowed to complete the paper within a year after finishing their required Social Theory and Methods of Inquiry courses. All students are responsible for recruiting two committee members to review and grade the paper, which is due the last day of classes in the Spring term. Students may work with their committee throughout the semester to ensure the paper aligns with expectations. Papers can be a journal-quality literature review, a journal-quality theory piece, a journal-quality empirical investigation, a grant proposal, or a research report akin to those put out by research organizations. Students then present their paper to the department. Their committee evaluates the paper based on the student's demonstrated ability to synthesize the relevant literature, conceptualize a research problem, and/or carry out a feasible research design. Both committee members must pass the paper. Any student who does not write a passing paper that term must do so the following semester. Those who are unsuccessful on the second attempt are dismissed from the program.
- Second, students must earn a cumulative grade point average of 3.0 or better in the degree curriculum. Students apply for graduation in Self-Service Banner by accessing TUportal. Note the deadline for submitting the graduation application on the Graduate School calendar (p. 13).

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/sociology-ma-la-soc-ma>

### Department Information:

Dept. of Sociology  
708 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
socadmis@temple.edu  
215-204-1494

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Admissions:*  
Catherine Staples  
cstaples@temple.edu  
215-204-1494

*Director of Graduate Studies:*  
James Bachmeier, PhD  
james.bachmeier@temple.edu

*Chairperson:*  
Kimberly Goyette, PhD  
kgoyette@temple.edu

# Sociology PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Sociology.

## About the Program

The graduate program in Sociology is devoted to the training of research scholars and educators in the discipline. Students have a variety of career goals, ranging from academic research and teaching to research and administration in private or public agencies. The doctoral program provides advanced training in sociological theory, statistics and research methods. The program's main areas of graduate teaching and research are Gender and Sexuality, Immigration and Globalization, Medical Sociology, Race and Ethnicity, and Urban Sociology.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is preferred, but part-time enrollment can be considered on a case-by-case basis.

**Interdisciplinary Study:** The program encourages students to participate in seminars in other social sciences, including Anthropology, Criminal Justice, Geography and Urban Studies, History, Political Science, Psychology, Urban Education, and Women's Studies. A dual degree program is also currently offered:

- PhD in Sociology/MA in Urban Bioethics with the Lewis Katz School of Medicine at Temple University

**Affiliation(s):** The program is affiliated with the American Sociological Association (ASA).

**Areas of Specialization:** The main areas of graduate teaching and research are:

- Gender and Sexuality
- Immigration and Globalization
- Medical Sociology
- Race and Ethnicity
- Urban Sociology

**Job Prospects:** Graduates of the PhD program are typically employed as either teaching-research scholars in an academic setting or as applied researchers and administrators in private and public agencies.

**Non-Matriculated Student Policy:** Students with a bachelor's degree may take graduate courses in Sociology without enrolling in a Temple University graduate program. A limit of 9 credits of graduate coursework taken prior to admission will be accepted toward a Sociology degree. Non-matriculated students should consult with the Graduate Chair before selecting their coursework if they plan to apply for the degree program.

**Financing Opportunities:** The Sociology Department and Temple University support full-time students during the academic year through Teaching Assistantships, part-time teaching and University Fellowships. Initial funding is contingent on the recommendation of the Admissions Committee. Continued funding is based on faculty assessment at the annual graduate student review. Funded students are typically offered a five-year funding package. Additional support for dissertation research is

available through fellowships competitively awarded by the university and from outside sources.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 15

Applications are evaluated together after the deadline has passed.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence, wherever possible.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Sociology, Criminal Justice, Economics, History, Political Science, Psychology, or Urban Studies is required, although a degree in other disciplines can be considered.

**Statement of Goals:** In approximately 500 to 1,000 words, share your interest in Temple's program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current personal resume or curriculum vitae required.

**Writing Sample:** The writing sample should demonstrate your ability to conduct research and write a scholarly paper. The paper should be on a sociological topic. It must be fully referenced according to a professional and scholarly style.

**Transfer Credit:** Graduate coursework in Sociology may be transferred from outside the university, provided that the credits were obtained no more than five years prior to the student's matriculation at Temple and the grades are "B" or better. The maximum number of credits a student may transfer is 12, if the credits earned did not result in the completion of an MA degree.

**Advanced Standing:** For students entering the PhD program who have received an MA degree elsewhere, up to 19 credits may be applied to the doctoral program, provided the courses are relevant to the department's required courses. These credits must have been obtained no more than five years prior to the student's matriculation at Temple and the grades must be "B" or better. The Graduate Chair decides which courses students may transfer. As a general rule, students with

transferred credits should expect that they will have to complete much of the required coursework in residence and are, further, expected to take two courses from Temple faculty in their area of focus before taking the PhD Preliminary Exam in their field.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 52*

*Required Courses:*

Code	Title	Credit Hours
<b>Social Theory Courses</b>		
SOC 8111	Classical Social Theory	3
SOC 9111	Contemporary Sociological Theory	3
<b>Methods of Inquiry Courses</b>		
SOC 8011	Logic of Inquiry	3
SOC 8211	Inferential and Multivariate Statistics	4
SOC 8221	Qualitative Methods	3
SOC 9211	Graduate Data Analysis	3
SOC 9241	Qualitative Data Analysis	3
<b>Electives</b> <sup>1</sup>		<b>21</b>
<b>Second-Year Milestone Courses</b> <sup>2</sup>		
SOC 8873	Writing for the Social Sciences	3
SOC 8883	Second-Year Research	0
<b>Research Courses</b>		
SOC 9994	Preliminary Examination Preparation	1
SOC 9998	Pre-Dissertation Research <sup>3</sup>	3
SOC 9999	Dissertation Research	2
<b>Total Credit Hours</b>		<b>52</b>

1

Of the seven elective courses, two must relate to the preliminary examination. Other electives may include: (1) SOC 9382 Independent Study Program: With the consent of the Graduate Chair and the instructor(s), students may take two Independent Study courses, which are intensive programs of study within a specific area of Sociology. Students who wish to take these courses must submit to the Graduate Chair at the beginning of the term a "Department Independent Study Request" form describing the readings and/or research they propose to undertake. The form must be signed by both the participating faculty member and the Graduate Chair. A final statement on the work completed must be filed with the Graduate Chair at the end of the term. Letter grades are given for these courses. (2) Outside courses: With the approval of the Graduate Chair, students may take two courses outside of the Sociology Department. (3) SOC 9385 Internship in Social Research: With the consent of the Graduate Chair, students may undertake an internship for course credit, provided the internship unites the core concepts of sociology with professional organizational settings and the community as a whole. Students who wish to complete an internship must submit to the Graduate Chair at the beginning of the term an "Internship Request Form" describing the duties, frequency of service and major outcomes. The form must be signed by both the supervisor of the internship and the Graduate Chair. Students are permitted to take up to two internship courses.

2

SOC 8873 and SOC 8883 are taken concurrently.

3

In lieu of SOC 9998, an additional credit may be taken in either SOC 9994 or SOC 9999.

### Culminating Events:

*Pre-Candidacy Evaluation:*

The Sociology Department evaluates doctoral students at the end of their second year based on two criteria:

- First, full-time doctoral students are expected to complete a Second Year Paper, which is due at the end of the Spring term of their second year. Part-time students are allowed to complete the paper within a year after finishing their required Social Theory and Methods of Inquiry courses. All students are responsible for recruiting two committee members to review and grade the paper, which is due the last day of classes in the Spring term. Students may work with their committee throughout the semester to ensure the paper aligns with expectations. Papers can be a journal-quality literature review, a journal-quality theory piece, a journal-quality empirical investigation, a grant proposal or a research report akin to those put out by research organizations. Students then present their paper to the department. Their committee evaluates the paper based on the student's demonstrated ability to synthesize the relevant literature, conceptualize a research problem, and/or carry out a feasible research design. Both committee members must pass the paper. Any student who does not write a passing paper that term must do so the following semester. Those who are unsuccessful on the second attempt are dismissed from the program.
- Second, students must earn a GPA of 3.4 or higher to continue in the doctoral program. However, a student may petition the Graduate Committee for re-consideration. After a petition is submitted, the Graduate Chair requires a written evaluation from each faculty member in the department with whom the student has taken a course. The student is permitted to continue in the PhD program if at least five faculty members write in support of the petition. Those not allowed to continue can graduate with an MA upon completion of its degree requirements.

*Preliminary Examination:*

After completing the required coursework, doctoral students are expected to take a preliminary examination in the form of a written area exam in the Spring term of their third year. Prior to taking the preliminary examination, students must complete two or more graduate-level courses related to that examination area offered by the faculty within the department. When doctoral students complete the required coursework, they must then take the preliminary examination in one of the broad examination areas identified by the Sociology Department as consistent with its mission and self-defined areas of strength: Gender and Sexuality, Immigration and Globalization, Medical Sociology, Race and Ethnicity, and Urban Sociology. However, students may request to take the exam in another area under the following conditions:

1. the student has taken at least two graduate-level courses in the Sociology Department in the requested area, one of which may be an independent study course;
2. three faculty members are willing to sponsor the exam; and
3. the Graduate Chair approves.

No later than the second Monday in August prior to the Spring term when the preliminary examination will be taken, students must fill out the "Department Preliminary Examination Application" form and indicate the selected area for the exam. The Department Chair appoints three faculty

members to form area-specific prelim committees charged with grading the exams.

The written area examination consists of four questions, and students must select and answer two of those questions. Students are given one week to complete the preliminary exam. Students receive the questions on an announced Monday in March or April, and the answers are due a week later. The Prelim Committee members assign a grade of "Pass" or "Fail" to each question along with their comments. A student needs at least two passes on both questions to pass the exam.

Based on the written area exam grade, the Graduate Chair assigns an overall "Pass" or "Fail" to each student for the preliminary examination. Any student who fails the written area exam may retake the exam. At the beginning of the following Fall term, three faculty members in the prelim area are appointed by the Department Chair to form a Prelim Committee. The committee submits four questions to the Graduate Chair by an announced date in October. The student receives the questions the Monday of the week before Thanksgiving week, and the exam is due on the Monday of Thanksgiving week.

*Doctoral Advisory Committee:*

Following the preliminary examination, the student selects the Chair of their Doctoral Advisory Committee. The remaining two or more members of the committee are selected by the student in consultation with the Chair. The majority of the committee members must be from the Sociology Department. Other members may include faculty from other departments within Temple University or from other universities. Doctoral-level expert advisors from outside university settings may also be considered as members.

To establish the Doctoral Advisory Committee, the student must submit a "Sociology Department Doctoral Advisory Committee" form to the department's Graduate Coordinator. To include committee members who are not members of the Temple Graduate Faculty on a Doctoral Advisory Committee, the Chair must request approval by submitting the "Nomination for Service on Doctoral Committee" form, found in TUportal under the Tools tab within "University Forms," and the proposed committee member's current curriculum vitae to the Graduate School. If a change is made in the composition of the Doctoral Advisory Committee, the change must be approved by the Chair of the committee. If the change involves the Chair of the committee, the Graduate Chair should be informed beforehand and the original Chair of the committee must be notified. The change must also be noted on the original "Sociology Department Doctoral Advisory Committee" form and signed by both the Chair of the committee and the Graduate Chair.

The Doctoral Advisory Committee meets at least once a year to review the candidate's progress and offer advice to the candidate.

*Dissertation Proposal:*

The dissertation proposal is a brief statement of the dissertation research. It should contain a review of the literature, a statement of the research problem, and a comprehensive description of the research strategy to be employed.

A digital copy of the proposal is made available to faculty at least two weeks prior to the oral defense of the proposal. All department faculty and graduate students are invited to attend the presentation of the dissertation proposal. Normally, proposal defenses are held during the academic year. All members of the committee must be present at the proposal defense.

The dissertation proposal is accepted only when members of the dissertation committee vote unanimously to accept it. An approved dissertation proposal along with the "Dissertation Proposal Transmittal for Elevation to Candidacy" form, found in TUportal under the Tools tab within "University Forms," must be filed with the Graduate School. After defending the dissertation proposal, a student is formally advanced to PhD candidacy.

If a change is made in the composition of the Doctoral Advisory Committee after the approval of the proposal, the change must be approved by the Chair of the committee and the Dean of the College. The change must be noted on the "Request for Change in Dissertation Committee" form, found in TUportal under the Tools tab within "University Forms," and filed with the Graduate School prior to posting the final dissertation defense.

*Dissertation Defense/PhD Final Examination:*

The dissertation is defended orally. Any discrepancy between the final version of the dissertation and the dissertation proposal should be explained and defended. A digital copy of the dissertation is made available to faculty at least two weeks before the dissertation defense. An abstract of the dissertation, not exceeding ten pages, must be given to all faculty members ten days before the defense.

The Dissertation Examining Committee is formed to evaluate the quality of the dissertation and conduct the oral defense. The committee includes the Doctoral Advisory Committee and at least one outside examiner. If the outside examiner is not a member of the Temple Graduate Faculty, the Chair of the Doctoral Advisory Committee must request approval by submitting the "Nomination for Service on Doctoral Committee" form, found in TUportal under the Tools tab within "University Forms," and the outside examiner's current curriculum vitae to the Graduate School at least four weeks in advance of the scheduled defense. Approval must be received prior to posting the oral defense. The Chair of the Dissertation Examining Committee must be a member of the Graduate Faculty, but may not be the Chair of the candidate's Doctoral Advisory Committee. This person, responsible for coordinating and conducting the defense, must be identified when the defense is posted with the Graduate School on the "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms."

All dissertation oral defense examinations are publicly announced by the Sociology Department in writing at least ten days in advance of the examination. The written announcement must be sent to all members of the Dissertation Examining Committee, all graduate faculty in the candidate's department, and the Graduate School. It must also be posted in the College. All dissertation examinations are open to the entire academic community.

Normally, the dissertation defense is held during the regular academic year. A dissertation defense passed after the Graduate School deadline in the Spring does not qualify the student for a May degree. A summer defense may be scheduled only if all members of the committee agree. The entire dissertation committee must attend the defense. If one or more committee members fail to attend the defense, the Departmental Chair cannot sign the form certifying the defense. All faculty members and students are invited to participate in the dissertation defense.

The dissertation committee must vote unanimously that the student has passed the PhD Final Examination. Each member of the dissertation committee indicates their assessment of the examination and signs their name to the "Final Examination Report for Doctoral Candidates" form, found in TUportal under the Tools tab within "University Forms."

If the Chair of the Sociology Department agrees that the dissertation meets departmental standards, the Chair signifies approval by signing for the department as well on the "Final Examination Report for Doctoral Candidates" form. The completed form is submitted to the Dean's Office of the College of Liberal Arts.

Information regarding the required format of the dissertation is available in the Graduate School's *Dissertation and Thesis Handbook*, found at <https://grad.temple.edu/resources/dissertation-thesis-handbook>. Fees may be required when filing the dissertation electronically, within 30 days of the dissertation defense, at <https://www.etdadmin.com/cgi-bin/school?siteid=171>. The student should heed the instructions found on the "Final Checklist of Dissertation Materials," identified as an appendix in the Graduate School's *Dissertation and Thesis Handbook*. Note that the signature page bearing original ink signatures constitutes the only item required to be submitted in hard copy to the Graduate School.

Students must apply to graduate, through the Sociology Department, by the deadline date announced in the graduate catalog each year. The deadline is usually three or four months before graduation. Applications may be obtained from the department's Graduate Coordinator or online. Upon completion of the doctoral program, the student is required to submit a bound copy of their dissertation to the Sociology Department, as well as a regular hard copy to the Chair of the Dissertation Examining Committee.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/sociology-phd-la-soc-phd>

### Department Information:

Dept. of Sociology  
708 Gladfelter Hall  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
socadmis@temple.edu  
215-204-1494

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Admissions:*  
Catherine Staples  
cstaples@temple.edu  
215-204-1494

*Director of Graduate Studies:*  
James Bachmeier, PhD  
james.bachmeier@temple.edu

*Chairperson:*  
Kimberly Goyette, PhD  
kgoyette@temple.edu

## Spanish MA

### COLLEGE OF LIBERAL ARTS

Learn more about the Master of Arts in Spanish.

### About the Program

The graduate program in Spanish integrates the established fields of Literature and Linguistics. At the MA level, the program develops advanced Spanish-language skills for diverse careers and trains students in the exercise of research and pedagogical skills necessary for the pursuit of the PhD.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Study Abroad:** Students may apply one approved non-Temple graduate course done in a Spanish-speaking country toward fulfillment of the MA requirements in Spanish. Opportunities for graduate study abroad through Temple programs are available occasionally.

**Areas of Specialization:** Areas of specialization include:

- Spanish Peninsular Literature
- Latin American Literature
- Hispanic Linguistics

**Job Prospects:** Graduates of the MA program in Spanish typically find employment in secondary education, in business and government, and in social and medical services.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to three courses with approval of the department or Graduate Chair.

**Financing Opportunities:** Teaching Assistants typically teach basic and intermediate Spanish or specialized language-skills courses. Assistantships carry a stipend and tuition remission. Candidates for Teaching Assistantships should express their interest and special needs in an addendum to the personal statement of the application to the graduate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15  
*Spring:* September 30

Applications are evaluated as they arrive, with attention paid to deadlines. Late applications may be considered.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members with personal knowledge of the applicant's academic achievements.



**Coursework Required for Admission Consideration:** An undergraduate major in Spanish or its coursework equivalent is required for entrance into the MA program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree, preferably in Spanish, is required for admission.

**Statement of Goals:** In approximately 2 to 3 pages, share your interest in Temple's Spanish program, future career goals, research goals, academic achievements, and any related experience. Applicants interested in Teaching Assistantships, fellowships or other financial support may describe special needs in an addendum to their personal statement.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

International applicants are required to provide scores from one of the following tests: Test of English as a Foreign Language (TOEFL®), the International English Language Testing System (IELTS™), or the Pearson Test of English Academic (PTE Academic™).

**Resume:** Current resume required.

**Writing Sample:** A paper or journal article written in Spanish is required.

**Transfer Credit:** One course (3 credits) undertaken while the student is enrolled in Temple's Spanish MA program may be transferred from a program in a Spanish-speaking country. The course must be a graduate course, and it must be approved by the Graduate Advisor. The maximum number of credits a student may transfer is 3.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
Non-advanced (5000-level) courses <sup>1</sup>		12
Advanced (8000- and 9000-level) courses <sup>2</sup>		18
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

Twelve credits is the maximum number that a student may take of 5000-level coursework.

<sup>2</sup>

Eighteen credits is the minimum number that a student may take of 8000- and 9000-level coursework.

**Language Examination:** Students must pass a written reading-comprehension examination in a foreign language other than Spanish. Examinations are usually taken in the Romance languages or German. Other languages may be accepted with approval.

**Culminating Event:**

*Comprehensive Examination:*

The purpose of the comprehensive examination is to evaluate the breadth and depth of students' knowledge of the discipline. Students must write a four-hour written comprehensive examination based on a customized reading list agreed on through consultation with three faculty members from the three course fields within the department: Spanish

Peninsular Literature, Latin American Literature, and Hispanic Linguistics. The examination is taken after the student fulfills the 30-credit course requirement and passes the reading-comprehension exam in a language other than Spanish or English.

All examinations must include representation from each of three course fields: Spanish Peninsular Literature, Latin American Literature, and Hispanic Linguistics. Graduate Faculty from each of the three fields write the questions and evaluate responses on a scale of "A" to "F." To be evaluated as passing, a grade of "B-" or higher must be achieved in response to each examination question.

Comprehensive examinations are administered once a term. They are scheduled by the Graduate Chair, with whom students must register.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/spanish-ma-la-span-ma>

### Department Information:

Dept. of Spanish and Portuguese  
428 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
spangrad@temple.edu  
215-204-8285

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Admissions:*

Victor Pueyo, PhD  
vpueyozo@temple.edu  
215-204-5129

*Program Coordinator:*

Annette Vega  
avega1@temple.edu  
215-204-2877

*Graduate Chairperson:*

Victor Pueyo, PhD  
vpueyozo@temple.edu  
215-204-5129

*Chairperson:*

Montserrat Piera, PhD  
montserrat.piera@temple.edu  
215-204-1706

## Spanish PhD

COLLEGE OF LIBERAL ARTS

Learn more about the Doctor of Philosophy in Spanish.

## About the Program

The graduate program in Spanish integrates the established fields of Literature and Linguistics. At the PhD level, the program provides opportunities for advanced study and research in Spanish Peninsular Literature, Latin American Literature, and Hispanic Linguistics as it trains scholars for careers in higher education.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** Areas of specialization include:

- Spanish Peninsular Literature
- Latin American Literature
- Hispanic Linguistics

**Job Prospects:** The department has an excellent record of placing graduates as full-time faculty in public and private universities.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to three courses with approval of the department or Graduate Chair.

**Financing Opportunities:** Teaching Assistants typically teach basic and intermediate Spanish or conversation, composition and reading courses. Assistantships carry a stipend and tuition remission. Candidates for Teaching Assistantships should express their interest and special needs in an addendum to the personal statement of the application to the graduate program.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 15

*Spring:* September 30

Applications are evaluated as they arrive, with attention paid to deadlines. Late applications may be considered.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members with personal knowledge of the applicant's academic and scholarly achievements.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 2 to 3 pages, share your interest in Temple's Spanish program, future career goals, research goals, academic achievements, and any related experience. Applicants interested in Teaching Assistantships, fellowships or other financial support may describe special needs in an addendum to their personal statement.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

International applicants are required to provide scores from one of the following tests: Test of English as a Foreign Language (TOEFL®), the International English Language Testing System (IELTS™), or the Pearson Test of English Academic (PTE Academic™).

**Resume:** Current resume required.

**Writing Sample:** A paper or journal article in Spanish is required as a writing sample.

**Advanced Standing:** Students are awarded advanced standing based on a review of transcripts and descriptions of previous graduate coursework in Spanish Literature or Spanish Linguistics at another institution. Advanced standing credits count toward the elective credit requirements of the PhD program.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Master's:* 30; 24 for students who earned their Spanish MA at Temple

*Number of Credits Required Beyond the Baccalaureate:* 54

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
8000-level Course in Hispanic Linguistics		3
8000-level Course in Latin American Literature		3
8000-level Course in Spanish Peninsular Literature		3
<b>Electives</b> <sup>1</sup>		<b>39</b>
<b>Research Courses</b>		
SPAN 9994	Preliminary Examination Preparation	
SPAN 9998	Pre-Dissertation Research	
SPAN 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>54</b>

1

Unless otherwise approved by the Associate Chair for Graduate Studies, all electives are Spanish courses taken at the 5000 and 8000 levels. Students specializing in Spanish Peninsular Literature or Latin American Literature are limited to taking two courses in related disciplines outside of the Department of Spanish and Portuguese. Students specializing in Hispanic Linguistics are limited to three related outside courses. These allowances may be reduced for individuals who earned an MA degree from another institution. Also note that nine credits earned at Temple University through the Continuing Studies Program may be used to satisfy the PhD degree requirements.

**Language Examination:** Students must pass written reading-comprehension examinations in two foreign languages other than Spanish. Examinations are usually taken in the Romance languages or German. Other languages may be accepted with approval.

**Culminating Events:**

*Preliminary Examination:*

The purpose of the written preliminary examination is to demonstrate critical and interpretive knowledge in two specific areas of Hispanic

Studies chosen by the doctoral student and approved by the faculty. The doctoral student may customize the reading lists for the examination in accordance with research interests. The written examination lasts 10 hours. The preliminary examination should be completed no more than one term after the student completes the coursework component of the program.

Examination areas are drawn from the three fields of study within the department: Spanish Peninsular Literature, Latin American Literature, and Hispanic Linguistics. Graduate Faculty members specializing in the subject areas selected for the examination write the questions for the preliminary examination and evaluate the examination. Each member grades examination answers on a scale of "A" to "F." A grade of "B-" or higher must be achieved in response to each question. The evaluators look for breadth and depth of understanding of specific research areas, the critical application of knowledge in response to specific exam questions, and an ability to write in a clear and concise manner using appropriate terminology.

The preliminary examination is given over a period of two weeks. Students who are preparing to write their preliminary examinations must meet with the Graduate Chair to register and confirm.

*Proposal:*

The dissertation proposal demonstrates the student's knowledge and ability to conduct the proposed research. The proposal typically consists of the presentation of the context and background surrounding a particular research question or problem, a survey and review of pertinent literature, and a detailed methodological plan for carrying out the proposed research. The proposal should be completed and approved by the student's Doctoral Advisory Committee no more than one year after the student completes coursework.

*Dissertation:*

The doctoral dissertation is an original empirical or theoretical study that makes a significant contribution to the field of Hispanic Studies. It should expand existing knowledge and demonstrate the student's mastery of research methods and of their primary area of research. The dissertation should be rigorously investigated, uphold the ethics and standards of the field, and demonstrate an understanding of the relationship between the primary area of research and the broader field of Hispanic Studies.

The Doctoral Advisory Committee is formed to oversee the student's dissertation research and is comprised of three Graduate Faculty members. One is the Committee Chair, who has responsibility for directly overseeing and guiding the student's progress, coordinating the responses of the Committee members, and informing the student of their academic progress.

The Dissertation Examining Committee is comprised of the Doctoral Advisory Committee and at least one additional examiner from outside the Department of Spanish and Portuguese. The outside examiner should be identified no later than the beginning of the term in which the student plans to defend the dissertation. The Dissertation Examining Committee evaluates the student's dissertation and public oral examination, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Committee votes to pass or fail the dissertation and the defense at the conclusion of the public oral defense.

If a student needs to change a member of a Committee, the new member must be approved by the department's Graduate Committee and registered with the Graduate Secretary and the Graduate School.

Students who are preparing to defend their dissertation must confirm a time and date with their Doctoral Advisory Committee Chair at least one month before the defense is to be held. After the Chair has arranged the time, date and room for the defense, a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," must be delivered to the Graduate School by the student at least 10 days before the defense. The department posts flyers announcing the defense.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/spanish-phd-la-span-phd>

### Department Information:

Dept. of Spanish and Portuguese  
428 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
spangrad@temple.edu  
215-204-8285

### Submission Address for Application Materials:

<https://apply.temple.edu/CLA/>

### Department Contacts:

*Admissions:*  
Victor Pueyo, PhD  
vpueyozo@temple.edu  
215-204-5129

*Program Coordinator:*  
Annette Vega  
avega1@temple.edu  
215-204-2877

*Graduate Chairperson:*  
Victor Pueyo, PhD  
vpueyozo@temple.edu  
215-204-5129

*Chairperson:*  
Montserrat Piera, PhD  
montserrat.piera@temple.edu  
215-204-1706

## Graduate Certificate: Crime Science

COLLEGE OF LIBERAL ARTS

### About the Certificate

This graduate certificate is not open for enrollment for the 2023-2024 academic year.

# Graduate Certificate: Gender, Sexuality and Women's Studies

COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Gender, Sexuality and Women's Studies.

## About the Certificate

Students in the Gender, Sexuality and Women's Studies (GSWS) graduate certificate program acquire and develop methodological and theoretical expertise in the interdisciplinary fields of gender, sexuality and women's studies.

The certificate can be pursued by students already enrolled in a Temple University graduate degree program. They complete the certificate coursework while simultaneously fulfilling the graduate requirements for their degree-granting department. It is also possible to pursue the certificate as a freestanding program.

All students complete the same course requirements to earn the certificate. Everyone in the program joins and benefits from a community of graduate students and faculty committed to the study of gender and sexuality in a wide range of disciplines.

**Time Limit for Completion of Certificate Coursework:** 3 years, with coursework completed in any order in that 3-year period

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis. Students undertaking the GSWS graduate certificate while enrolled in a graduate degree program at Temple complete the certificate while fulfilling the requirements for their graduate degree program. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program.

**Job Prospects:** The GSWS graduate certificate is a credential that enhances students' prospects in today's highly competitive job market by signaling a demonstrated interest in and commitment to diversity and inclusion.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall and Spring:* Applications must be submitted by the end of the add/drop period.

Students currently enrolled in a graduate degree program at Temple University should use the internal application form. Students not currently enrolled at Temple should use the external application form. Both forms can be found on this page: <https://liberalarts.temple.edu/academics/departments-and-programs/gender-sexuality-and-womens-studies/graduate>.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants already admitted to a graduate degree program at Temple University have demonstrated that they possess the required bachelor's degree. Applicants not currently enrolled in a Temple University graduate degree

program and applicants enrolled in a graduate degree program at another university must submit official transcripts for all coursework taken since high school, whether or not a degree was earned from the institution(s). Evidence of the award of a baccalaureate degree from an accredited university with an undergraduate GPA of at least 3.0 on a 4.0 scale must be shown.

### Additional Requirements for Students Not Currently Enrolled in a Graduate Degree Program at Temple University:

- Two letters of recommendation from persons in a position to evaluate the applicant's academic ability and accomplishments
- A personal statement of no more than 250 words indicating interests, plans and objectives within the fields of gender, sexuality and women's studies

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
GSWS 8001	Feminist and Queer Studies <sup>1</sup>	3
GSWS 9991	Research Seminar <sup>2</sup>	3
	Electives <sup>3</sup>	6
<b>Total Credit Hours</b>		<b>12</b>

1

GSWS 8001 is offered annually in the Fall term.

2

GSWS 9991 is offered annually in the Spring term.

3

Students take 6 credits of approved courses focusing on gender and/or sexuality from their own department, if enrolled in a graduate degree program at Temple, or any academic department at Temple University, as identified in the list below. Note that the following list is not exhaustive, and students may request permission to take other gender/sexuality-themed courses on a case-by-case basis.

## Approved Electives with a Gender and/or Sexuality Theme

Code	Title	Credit Hours
AAAS 9645	Seminar in the African American Woman	
ANTH 5355	Anthropology of Sexuality and Gender	
ANTH 5358	Race and Class in North America	
CJ 8202	Corrections	
CPSY 5526	Multicultural Counseling	
CPSY 8789	Seminar in Race, Culture, and Gender in Psychotherapy	
DANC 8872	Educating Dance	
DANC 9861	Dance and the Gendered Body: Historical Perspectives	
EDAD 5615	Gender Issues in Education	
EPBI 8011	Social Epidemiology	
GUS 5097	Race, Class, Gender in Cities	

HIED 5801	Gender Issues in Education
HIST 5231	
HIST 5800	Comparative Women's History
HIST 8009	
HIST 8402	Jewish History
HIST 8707	History of Sexuality
KINS 9403	Sociology of Kinesiology
MLA 5150	Topics in Gender Studies
PHIL 5217	Feminist Epistemology and the Philosophy of Science
RCTH 5212	Play and Pediatric Development
REL 8012	Religion and Sexuality
REL 8401	Race, Gender, Class and Ethnicity in Ancient Near East
SOC 5321	
SOC 8401	Sexuality and Gender
SOC 8411	Gender and Body
SSWG 8603	Advanced Human Behavior and the Social Environment - Gender and Sexuality through the Lifespan
SSWG 8607	Advanced Policy - Gender and Sexuality

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://liberalarts.temple.edu/academics/departments-and-programs/gender-sexuality-and-womens-studies/graduate>

### Department Contacts:

*Administrator:*

LaTasha Goodman  
latasha.goodman@temple.edu  
215-204-8516

*GSWS Program Director:*

Barbara Thornbury, PhD  
bthor@temple.edu

## Graduate Certificate: Geographic Information Systems

COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Geographic Information Systems.

### About the Certificate

Geographic Information Systems (GIS) is a powerful analytical software tool that combines data and maps to solve complex problems at different scales. GIS is a rapidly growing field with applications in a variety of disciplines, including engineering, journalism, planning, public health and sustainability. The Graduate Certificate in GIS teaches advanced location science and technology that meets the increased demand for well-trained professional practitioners. Our courses introduce students to a variety of cutting-edge spatial analysis technology and mapping software to identify, analyze and visualize spatial data patterns. The Graduate

Certificate in GIS has a range of electives to allow students to tailor their coursework to their professional or academic interests. The Department of Geography and Urban Studies faculty have expertise in a range of GIS applications, including business, environment, geovisualization, health, location analysis, remote sensing and urban analytics.

The certificate complements our Professional Science Master's in GIS and may serve as a gateway into the program. Students in the certificate program pursue a curriculum that provides training in GIS that also complements graduate programs offered in the College of Education and Human Development, College of Liberal Arts, College of Public Health, College of Science and Technology, Fox School of Business and Management, and Lew Klein College of Media and Communication.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate program's administrator for more information.

**Job Prospects:** Training in GIS prepares individuals to take on advanced research positions in technology-based companies, governmental agencies and nonprofit organizations. The array of electives for the certificate allows students to specialize in the areas of their professional or academic interests.

**Non-Matriculated Student Policy:** Courses are available to non-matriculated graduate students with approval from the Graduate Chair or Assistant Director. Non-matriculated students may take up to 12 credits prior to matriculation in the Professional Science Master's in GIS. Please contact psmgis@temple.edu for more information about registering as a non-matriculated student.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring:* Admission is on a rolling basis. Interested students should contact psmgis@temple.edu for permission to enroll in coursework. Students are processed by the Office of Continuing Studies.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
<b>Core Course</b> <sup>2</sup>		
GUS 5062	Fundamentals of Geographical Information Systems	3
or GUS 8067	Spatial Database Design	
<b>Electives</b>		
Select three from the following: <sup>3</sup>		9
GUS 5000	Special Topic Seminars <sup>4</sup>	
GUS 5061	Cartographic Production	

GUS 5063	Remote Sensing
GUS 5065	Urban Geographical Information Systems
GUS 5066	Environmental Applications of GIS
GUS 5067	GIS and Location Analysis
GUS 5068	Census Analysis with Geographical Information Systems
GUS 5069	GIS for Health Data Analysis
GUS 5072	Advanced Remote Sensing
GUS 5073	Geovisualization
GUS 5162	Advanced Statistics for Urban Applications
GUS 8065	Cartographic Design
GUS 8066	Application Development for Geographic Information Systems
GUS 8067	Spatial Database Design
GUS 8068	Web Mapping and Map Servers

**Total Credit Hours** 12

1

Matriculated graduate students may take certificate courses as electives for their program of study with the approval of their program advisor.

2

GUS 8067 Spatial Database Design is required if GUS 5062 Fundamentals of Geographical Information Systems has already been taken at any level or if the student has equivalent industry experience. Permission is required from the Graduate Chair or Assistant Director.

3

Alternately, students may select any course within the range of GUS 5030-5040 and GUS 8060-8070 as an elective toward the certificate.

4

One GUS 5000 Special Topic Seminars course with a focus on Spatial Analysis may be used toward the certificate. Special Topic courses must be approved by the Graduate Chair or Assistant Director.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/geographic-information-systems-certificate-graduate-la-gis-grad>

### Admissions Information:

Dept. of Geography and Urban Studies  
308 Gladfelter Hall (025-27)  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
psmgis@temple.edu  
215-204-7692

### Department Contacts:

*Senior Manager, Administration:*  
Vicki Giammarco  
vicki.giammarco@temple.edu  
215-204-7692

*Program Coordinator:*  
Liz Janczewski

psmgis@temple.edu  
215-204-3386

*Assistant Director:*  
Lee Hachadoorian, PhD  
lee.hachadoorian@temple.edu  
215-204-3331

*Graduate Chairperson:*  
Hamil Pearsall, PhD  
hamil.pearsall@temple.edu  
215-204-3074

*Chairperson:*  
Melissa Gilbert, PhD  
mgilbert@temple.edu  
215-204-7692

## Graduate Certificate: Geospatial Data Science

COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Geospatial Data Science.

### About the Certificate

Data science is an emerging interdisciplinary field with roots in computer science, mathematics and statistics. Spatial data are common and high value, including government administrative data, remotely sensed images, smartphone and vehicle location data, and volunteered geographic information (VGI). Our courses introduce students to big data handling, data mining, geosimulation, geospatial analytics and machine learning. The Department of Geography and Urban Studies faculty have expertise in cartography, GIS, machine learning, remote sensing, spatial data science, spatial statistics and urban analytics.

This graduate certificate complements our Professional Science Master's in Geospatial Data Science and may serve as a gateway into the program. Students in the certificate program pursue a curriculum that provides training in geospatial data science that also complements graduate programs offered in the College of Education and Human Development, College of Liberal Arts, College of Public Health, College of Science and Technology, Fox School of Business and Management, and the Lew Klein College of Media and Communication.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate program's administrator for more information.

**Job Prospects:** Combined training in GIS and data science prepares individuals to take on lead data science teams in technology-based companies, governmental agencies and nonprofit organizations who regularly work with big geospatial data and undertake projects that require geospatial skills and a spatial perspective.

**Non-Matriculated Student Policy:** Courses are available to non-matriculated graduate students with approval from the Graduate Chair

or Assistant Director. Non-matriculated students may take up to 9 credits prior to matriculation, but an exception can be made to accept all 12 certificate credits for those who want to pursue the Professional Science Master's in Geospatial Data Science. For more information, please email [psmgis@temple.edu](mailto:psmgis@temple.edu) about registering as a non-matriculated student.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring:* Admission is on a rolling basis. Interested students should contact [psmgis@temple.edu](mailto:psmgis@temple.edu) for permission to enroll in coursework. Students are processed by the Office of Continuing Studies.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
GUS 5161 or GUS 5073	Statistics for Urban Spatial Analysis Geovisualization	3
GUS 8061	Big GeoSpatial Data	3
<b>Electives</b>		
Select two from the following: <sup>1</sup>		6
GUS 5031	GIS Programming	
GUS 5032	Geosimulation	
GUS 5062	Fundamentals of Geographical Information Systems	
GUS 5063	Remote Sensing	
GUS 5065	Urban Geographical Information Systems	
GUS 5066	Environmental Applications of GIS	
GUS 5067	GIS and Location Analysis	
GUS 5068	Census Analysis with Geographical Information Systems	
GUS 5069	GIS for Health Data Analysis	
GUS 5072	Advanced Remote Sensing	
GUS 5162	Advanced Statistics for Urban Applications	
GUS 8066	Application Development for Geographic Information Systems	
GUS 8069	GIS Ethics and Professional Practice	
<b>Total Credit Hours</b>		<b>12</b>

1

Electives are selected from any of the required or elective courses for the Geospatial Data Science PSM, as identified above.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/geospatial-data-science-certificate-graduate-la-gsds-grad>

### Admissions Information:

Dept. of Geography and Urban Studies  
308 Gladfelter Hall (025-27)  
1115 W. Polett Walk  
Philadelphia, PA 19122-6089  
[psmgis@temple.edu](mailto:psmgis@temple.edu)  
215-204-7692

### Department Contacts:

*Senior Manager, Administration:*  
Vicki Giammarco  
[vicki.giammarco@temple.edu](mailto:vicki.giammarco@temple.edu)  
215-204-7692

*Program Coordinator:*  
Liz Janczewski  
[psmgis@temple.edu](mailto:psmgis@temple.edu)  
215-204-3386

*Assistant Director:*  
Lee Hachadoorian, PhD  
[lee.hachadoorian@temple.edu](mailto:lee.hachadoorian@temple.edu)  
215-204-3331

*Graduate Chairperson:*  
Hamil Pearsall, PhD  
[hamil.pearsall@temple.edu](mailto:hamil.pearsall@temple.edu)  
215-204-3074

*Chairperson:*  
Melissa Gilbert, PhD  
[mgilbert@temple.edu](mailto:mgilbert@temple.edu)  
215-204-7692

## Graduate Certificate: Neuroscience

COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Neuroscience.

### About the Certificate

The graduate certificate in Neuroscience was established in the College of Liberal Arts to impart training to graduate students who are interested in developing an in-depth understanding of neuroscience and pursuing research in this area. Students are required to fulfill the following requirements as a part of this certificate program:

1. Be a currently matriculating graduate student in good standing in a Temple University PhD program.
2. Meet all obligations of the student's participating department.
3. Include one member of the Neuroscience program on their dissertation committee.

4. Enroll in NSCI 9381 Readings in Neuroscience, which requires attending and participating in the seminars/journal clubs of the Neuroscience program, for three academic terms of 1 credit each.
5. Enroll in two courses in each of the following Neuroscience specialization areas:
  - Behavioral/Cognitive/Systems Neuroscience
  - Cellular/Molecular Neuroscience

Upon successful completion of all departmental and Neuroscience program requirements, students receive a PhD degree in the discipline represented by their department with a certificate in Neuroscience. Doctoral students enrolled in the Department of Biology and Department of Psychology and Neuroscience can be awarded this specialization in Neuroscience.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed only on a full-time basis.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Neuroscience by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** Applicants already admitted to a graduate degree program at Temple University have demonstrated that they possess the required bachelor's degree.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 15*

*Required Courses:*

Code	Title	Credit Hours
NSCI 9381	Readings in Neuroscience (3 terms)	3
	Behavioral/Cognitive/Systems Neuroscience courses <sup>1</sup>	6
	Cellular/Molecular Neuroscience courses <sup>1</sup>	6
<b>Total Credit Hours</b>		<b>15</b>

1

Of the four Neuroscience courses required in the specialization areas, three 3-credit courses are mandatory. One course may, however, be taken from the 2-credit courses offered by the Lewis Katz School of Medicine, which ensures that students have a wider breadth of course selection in the certificate program. When students select a 2-credit course, they are limited to taking one such course and, to achieve the 15 credits required to earn the certificate, must take an additional academic term of NSCI 9381 Readings in Neuroscience for 1 credit.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/neuroscience-certificate-graduate-la-ns-ci-grad>

### Department Information:

College of Liberal Arts Neuroscience Program  
618 Weiss Hall  
1701 N. 13th Street  
Philadelphia, PA 19122-6085  
neuro@temple.edu  
215-204-3441

### Submission Address for Application Materials:

Angela Miller, Program Coordinator  
Neuroscience Certificate  
1701 N. 13th Street, 618 Weiss Hall (265-67)  
Philadelphia, PA 19122-6085

### Department Contacts:

*Program Coordinator:*  
Angela Miller  
adgmiller@temple.edu  
215-204-3441

*Program Director:*  
Mathieu Wimmer, PhD  
mathieu.wimmer@temple.edu  
215-204-7495

## Graduate Certificate: Non-Profit Management

COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Non-Profit Management.

### About the Certificate

By one estimate, the United States has about 1.5 million nonprofit organizations of varying size, structure and purpose that employ over 14 million workers. Nonprofits work closely with each other as well as with governments at the federal, state and municipal levels. Government agencies contract with nonprofits to conduct research, evaluate programs, and deliver goods and services during program implementation. Many nonprofits also advocate on behalf of particular causes and constituencies. Such organizations have a critical role in responding to a wide array of challenges faced by society, such as access to affordable healthcare, criminal justice reform, economic development, education system reform, poverty and hunger, sustainability and others.

The Non-Profit Management certificate's curriculum gives students a foundation in the themes, concepts and tools of nonprofit management. Students who earn a "B" or better in their coursework and are admitted into the Master of Public Policy (MPP) program have at least 9 credits applied toward completion of the MPP.



**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online, with virtual synchronous sessions held in the evenings to accommodate working professionals

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate program's administrator for more information.

**Job Prospects:** The Non-Profit Management certificate program is intended primarily for graduate students who seek preparation for jobs in the nonprofit sector and professionals working in the field who hope to advance their careers. Completion of the certificate signals to employers that the student has a solid foundation in the concepts, knowledge and practical tools of nonprofit management.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

## Admission Requirements and Deadlines

*Fall and Spring:* Admission is rolling.

Submit your application at <https://forms.gle/5ULjY3XTN2jLt7oH7>.

Questions should be directed to [mpp@temple.edu](mailto:mpp@temple.edu).

**Bachelor's Degree in Discipline/Related Discipline:** Applicants already admitted to a graduate degree program at Temple University have demonstrated that they possess the required bachelor's degree. Applicants not currently enrolled in a Temple University graduate degree program and applicants enrolled in a graduate degree program at another university must submit official transcripts for all coursework taken since high school, whether or not a degree was earned from the institution(s). Evidence of the award of a baccalaureate degree from an accredited university with an undergraduate GPA of at least 2.5 on a 4.0 scale must be shown. Transcripts should be sent to [mpp@temple.edu](mailto:mpp@temple.edu).

**Additional Requirements for Students Not Currently Enrolled in a Temple University Graduate Degree Program:** Submit these additional materials via email to [mpp@temple.edu](mailto:mpp@temple.edu):

- Two letters of recommendation from persons in a position to evaluate the applicant's academic ability and accomplishments
- A personal statement of approximately 250 words indicating interests, plans and objectives within the field of nonprofit management
- Current resume

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PLCY 5001	Non-Profit Organization and Management	3
PLCY 5002	Non-Profit Fundraising	3
PLCY 5003	Financial Management for Non-Profit Organizations	3

### Elective

PLCY 5004	Leadership in Public Sector and Non-Profit Organizations	3
or GUS 5165	Community Based Program Evaluation	
or SGM 5131	Social Entrepreneurship - Innovative Approaches to Achieving Positive Social Impact	

**Total Credit Hours** 12

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/non-profit-management-certificate-graduate-la-npm-grad>

### Department Information:

Public Policy Program  
837 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6089  
[mpp@temple.edu](mailto:mpp@temple.edu)  
215-204-7817

### Submission Address for the Application:

<https://forms.gle/5ULjY3XTN2jLt7oH7>

### Submission Address for Application Materials:

[mpp@temple.edu](mailto:mpp@temple.edu)

### Department Contacts:

*Admissions:*  
Gary Mucciaroni, PhD  
Director, MPP Program  
[mpp@temple.edu](mailto:mpp@temple.edu)  
215-204-6195

Samantha Apgar  
Assistant Director, MPP Program  
[samantha.apgar@temple.edu](mailto:samantha.apgar@temple.edu)  
215-204-7817

## Graduate Certificate: Police Leadership

COLLEGE OF LIBERAL ARTS

### About the Certificate

This graduate certificate is not open for enrollment for the 2023-2024 academic year.

## Graduate Certificate: Public Policy

COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Public Policy.

## About the Certificate

Public policy plays a key role in virtually every aspect of social life. Governments at the federal, state and municipal levels make laws, issue regulations, levy taxes and spend money in ways that can have profound impacts on a variety of important and challenging issues that we confront as a society, including access to affordable healthcare, climate change, control of epidemics, homeland security, immigration, income inequality, reproductive rights, unemployment and underemployment, and many others.

The Public Policy certificate's curriculum gives students a foundation in the themes, concepts and tools of public policy that orient them to the activities of federal, state and municipal governments and the nonprofit and for-profit organizations that work closely with them. Students in the certificate program who earn a "B" or better in their coursework and are admitted into the Master of Public Policy (MPP) program have the certificate credits applied toward completion of the MPP.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Center City for in-person instruction or Online with a combination of asynchronous and synchronous evening components

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate program's administrator for more information.

**Job Prospects:** The Public Policy certificate program is intended primarily for graduate students who seek preparation for better jobs in the public and nonprofit sectors as well as academia. Completion of the certificate signals to employers that the student has a solid foundation in concepts, knowledge and practical tools of public policy making, including creation, implementation, evaluation and analysis.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

## Admission Requirements and Deadlines

*Fall and Spring:* Admission is rolling.

Submit your application at <https://forms.gle/1HsoprYS5z3DDggU8>.

Questions should be directed to [mpp@temple.edu](mailto:mpp@temple.edu).

**Bachelor's Degree in Discipline/Related Discipline:** Applicants already admitted to a graduate degree program at Temple University have demonstrated that they possess the required bachelor's degree. Applicants not currently enrolled in a Temple University graduate degree program and applicants enrolled in a graduate degree program at another university must submit official transcripts for all coursework taken since high school, whether or not a degree was earned from the institution(s). Evidence of the award of a baccalaureate degree from an accredited university with an undergraduate GPA of at least 3.0 on a 4.0 scale must be shown. Transcripts should be sent to [mpp@temple.edu](mailto:mpp@temple.edu).

**Additional Requirements for Students Not Currently Enrolled in a Temple University Graduate Degree Program:** Submit these additional materials via email to [mpp@temple.edu](mailto:mpp@temple.edu):

- Two letters of recommendation from persons in a position to evaluate the applicant's academic ability and accomplishments
- A personal statement of approximately 250 words indicating interests, plans and objectives within the field of public policy
- Current resume

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
ECON 5102	Economic Decisions and Public Policy	3
GUS 5165	Community Based Program Evaluation	3
PLCY 8118	The Policy-Making Process	3
PLCY 8119	Policy Analysis	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/public-policy-certificate-graduate-la-ppol-grad>

### Department Information:

Public Policy Program  
837 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6089  
[mpp@temple.edu](mailto:mpp@temple.edu)  
215-204-7817

### Submission Address for the Application:

<https://forms.gle/1HsoprYS5z3DDggU8>

### Submission Address for Application Materials:

[mpp@temple.edu](mailto:mpp@temple.edu)

### Department Contacts:

*Admissions:*  
Gary Mucciaroni, PhD  
Director, MPP Program  
[mpp@temple.edu](mailto:mpp@temple.edu)  
215-204-6195

Samantha Apgar  
Assistant Director, MPP Program  
[samantha.apgar@temple.edu](mailto:samantha.apgar@temple.edu)  
215-204-7817

# Graduate Certificate: Spanish for Health Professions

COLLEGE OF LIBERAL ARTS

Learn more about the graduate certificate in Spanish for Health Professions.

## About the Certificate

The online graduate certificate in Spanish for Health Professions prepares professionals in healthcare fields to engage in culturally sensitive, knowledgeable Spanish communication with the Latinx and Spanish-speaking community in healthcare settings. This exclusively online certificate offers maximum flexibility in recognition of the unique time and geographical constraints of the working professional. The coursework allows students to:

- hone and improve their oral, aural, reading and writing skills in Spanish;
- appreciate, recognize and comprehend the varieties of language used by the target population;
- engage in the practice of the techniques of interpretation and translation between Spanish and English; and
- learn to recognize their own linguistic capacities and how to harness them.

Cultural competency is developed as students examine the diversity of the Latinx population in the United States, discussing cultural norms, concerns and expectations around healthcare. Students also acquire an overview of the most prominent health issues in the community to enable them to engage with patients on these topics.

As the coursework is completed entirely in Spanish, both a theoretical and a practical grasp of the issues and the language are attained by completion of the certificate. Once completed, graduates are better able to meet the needs of a healthcare system that demands culturally competent, bilingual individuals be able to serve a diverse set of patients in a variety of healthcare settings.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online, with virtual synchronous sessions held in the evenings to accommodate working professionals

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis. Students may take one course per academic term. Courses are offered in seven-week sessions with two sessions in the Fall semester and two sessions in the Spring semester. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate program's administrator for more information.

**Job Prospects:** The certificate program is designed for those either working in the healthcare professions or with the background to do so. Completion of the certificate advances an employee's professional training, adding value to their agency and their salary.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

## Admission Requirements and Deadlines

*Fall:* Admission is rolling. Students may begin when SPAN 5601 is offered.

Submit your application at <https://form.jotform.com/200635209925050>.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of a baccalaureate degree at Temple University with a GPA of 2.5 or better.

**Statement of Goals:** In 500 to 1,000 words, outline your interest in seeking the certificate in Spanish for Health Professions.

**Resume:** Current resume required.

**Language Requirement:** All applicants must demonstrate proficiency equivalent to completion of SPAN 1003 at Temple University through the placement exam, AP credits, previous coursework, or Spanish advising placement.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
SPAN 5601	Spanish for Health Professions <sup>1</sup>	3
SPAN 5602	Advanced Medical Spanish <sup>1</sup>	3
SPAN 5603	Latino Health Issues in the US	3
SPAN 5604	Spanish/English Interpretation Techniques for Healthcare	3
<b>Total Credit Hours</b>		<b>12</b>

1

If demand warrants, this course may be offered in the summer.

Healthcare professionals may elect to complete the certificate through this intensive one-year schedule:

Year 1		
Fall		Credit Hours
SPAN 5601	Spanish for Health Professions <sup>1</sup>	3
SPAN 5602	Advanced Medical Spanish <sup>2</sup>	3
<b>Credit Hours</b>		<b>6</b>
Spring		
SPAN 5603	Latino Health Issues in the US <sup>3</sup>	3
SPAN 5604	Spanish/English Interpretation Techniques for Healthcare <sup>4</sup>	3
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>12</b>

1

SPAN 5601 is taken as a 7-week (7A) course that begins at the start of the regular Fall term.

2

SPAN 5602 is taken as a 7-week (7B) course that begins in the middle of the regular Fall term.

3

SPAN 5603 is taken as a 7-week (7A) course that begins at the start of the regular Spring term.

4

SPAN 5604 is taken as a 7-week (7B) course that begins in the middle of the regular Spring term.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

**Culminating Event:** Students must successfully pass all four courses to earn the certificate. None of these courses can be applied toward a master's or doctoral degree in the Department of Spanish and Portuguese.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/spanish-for-the-health-professions-certificate-graduate-la-sphp-grad>

### Admissions Information:

Dept. of Spanish and Portuguese  
428 Mazur Hall  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090  
spangrad@temple.edu  
215-204-2877

### Mailing Address for Application Materials:

Dept. of Spanish and Portuguese  
428 Mazur Hall (022-34)  
1114 W. Polett Walk  
Philadelphia, PA 19122-6090

### Department Contacts:

*Certificate Coordinator:*  
Norma Corrales-Martin, PhD  
436 Mazur Hall  
ncm@temple.edu

## Low Klein College of Media and Communication

The Low Klein College of Media and Communication (KCMC) at Temple University is one of the most prominent of its kind in the nation. Combining a history of success with an eye on the constantly shifting horizon, Klein College offers one of the most advanced and diverse programs for learning and networking in the communications field.

With its superb faculty, diverse student body, and location in the nation's fourth-largest media market, KCMC is one of the most exciting places in the world to study the role and many facets of communication in public life. Possessing an array of experience and expertise, KCMC faculty range from world-renowned scholars to Pulitzer Prize-winning practitioners. All are dedicated to teaching and ensuring that our school is a powerful force for innovation, diversity and social justice. We foster curiosity in our students and encourage their willingness to begin with tough questions and challenge themselves and each other in pursuing truth. Our students graduate with the confidence to communicate effectively across cultures.

Klein College students learn by doing. Classrooms provide hands-on training using industry-standard technology. All KCMC facilities are uniquely outfitted for the teaching, research and production of all disciplines of communications study. Annenberg Hall is home to:

- a 75-seat film and video screening room,
- broadcast and film production areas,
- electronic news writing and editing rooms,
- journalism and photography labs,
- multimedia labs,
- video and film editing areas, and
- three fully equipped studios for educational use, including videography, television direction and broadcast performance.

At Temple University Center City, the Multimedia Urban Reporting Lab (MURL) is a newsroom that features wireless networking, digital recorders, access to the AP wire, and video equipment.

Since the founding of the Department of Journalism in 1927, the structure and curriculum of the communications program has evolved to meet the demands and expectations of a changing media landscape. Key events include:

- In 1967, the School of Communications and Theater was formed by combining the Department of Journalism and the Department of Radio, Television and Film.
- Also in 1967, an MFA in Theater was offered as the first graduate degree and was followed four years later by an MFA in Film and Video.
- In 2010, TUTV, Temple's digital cable channel, was launched within the city of Philadelphia on Comcast and Verizon, as well as online at <https://templetv.net/>.
- In 2012, the school was renamed the School of Media and Communication when a University realignment of schools and colleges moved the Department of Film and Media Arts and Department of Theater to a new Center for the Arts.

In March 2017, in celebration of the school's 50th anniversary, an official renaming made it the Low Klein College of Media and Communication. The name change honors broadcasting pioneer Low Klein. Klein began

teaching TV courses at Temple University in 1952, while he also worked as an executive at WFIL-TV (now WPVI) in Philadelphia. In the ensuing 65 years, he helped launch the careers of hundreds of professionals, including *CBS Evening News* Executive Producer Steve Capus, *SMC '86*; the late comedian Bob Saget, *SMC '78*; and the late host and producer Dick Clark. In addition to serving as executive producer of *American Bandstand* and producing legendary Philadelphia-area programs, such as *Captain Noah and His Magical Ark*, Klein played an instrumental role in launching Channel 6's *Action News* format as program director of the station in 1970. He also spent 15 years producing Philadelphia Phillies telecasts and was president of Gateway Communications, which owned four TV stations in the East. Throughout his momentous career, Klein taught as a part-time adjunct professor at Temple.

## Graduate Programs and Certificates

- Communication for Development and Social Change MS (p. 438)
- Communication Management MS (p. 440)
- Journalism MJ (p. 441)
- Media and Communication PhD (p. 443)
- Media Studies and Production MA (p. 445)
- Graduate Certificate: Conflict Management and Dispute Resolution (p. 448)
- Graduate Certificate: Cultural Analytics (p. 449)
- Graduate Certificate: Public Relations (p. 451)
- Graduate Certificate: Strategic Communication and Cross-Cultural Leadership (p. 452)

## Graduate Faculty

*Osei Alleyne*, Assistant Professor, Department of Media Studies and Production, Low Klein College of Media and Communication; PhD, University of Pennsylvania.

*Jennifer Gerard Ball*, Assistant Professor, Department of Advertising and Public Relations, Low Klein College of Media and Communication; PhD, University of Texas at Austin.

*Geoffrey Baym*, Professor, Department of Media Studies and Production, Low Klein College of Media and Communication; PhD, University of Utah.

*Deborah Cai*, Professor, Department of Communication and Social Influence, Low Klein College of Media and Communication; PhD, Michigan State University.

*Jessica Castonguay*, Assistant Professor, Department of Advertising and Public Relations, Low Klein College of Media and Communication; PhD, University of Arizona.

*Erin K. Coyle*, Associate Professor, Department of Journalism, Low Klein College of Media and Communication; PhD, University of North Carolina at Chapel Hill.

*Brian Creech*, Associate Professor, Department of Journalism, Low Klein College of Media and Communication; PhD, University of Georgia.

*Fabienne L. Darling-Wolf*, Professor, Department of Journalism, Low Klein College of Media and Communication; PhD, University of Iowa.

*Jason del Gandio*, Associate Professor of Instruction, Department of Communication and Social Influence, Low Klein College of Media and Communication; PhD, Southern Illinois University, Carbondale.

*Gregg C. Feistman*, Associate Professor of Practice, Department of Advertising and Public Relations, Lew Klein College of Media and Communication; MA, Marist College.

*Jan L. Fernback*, Associate Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of Colorado.

*Edward L. Fink*, Laura H. Carnell Professor, Department of Communication and Social Influence, Lew Klein College of Media and Communication; PhD, University of Wisconsin-Madison.

*Scott Gratson*, Professor of Instruction, Department of Communication and Social Influence, Lew Klein College of Media and Communication; PhD, University of Denver.

*Bruce W. Hardy*, Associate Professor, Department of Communication and Social Influence, Lew Klein College of Media and Communication; PhD, University of Pennsylvania.

*Marc Lamont Hill*, Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of Pennsylvania.

*R. Lance Holbert*, Professor, Department of Communication and Social Influence, Lew Klein College of Media and Communication; PhD, University of Wisconsin-Madison.

*Andrew Iliadis*, Assistant Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, Purdue University.

*Thomas L. Jacobson*, Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of Washington.

*Tricia S. Jones*, Professor, Department of Communication and Social Influence, Lew Klein College of Media and Communication; PhD, The Ohio State University.

*Carolyn L. Kitch*, Laura H. Carnell Professor, Department of Journalism, Lew Klein College of Media and Communication; PhD, Temple University.

*Lauren Kogen*, Assistant Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of Pennsylvania.

*Heather LaMarre*, Associate Professor, Department of Communication and Social Influence, Lew Klein College of Media and Communication; PhD, The Ohio State University.

*Susanna Lee*, Assistant Professor, Department of Advertising and Public Relations, Lew Klein College of Media and Communication; PhD, University of Florida.

*Matthew Lombard*, Associate Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, Stanford University.

*Larisa Kingston Mann*, Assistant Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of California, Berkeley Law.

*George W. Miller III*, Associate Professor of Practice, Department of Journalism, Lew Klein College of Media and Communication; MJ, Columbia University.

*David T.Z. Mindich*, Professor, Department of Journalism, Lew Klein College of Media and Communication; PhD, New York University.

*Logan K. Molyneux*, Associate Professor, Department of Journalism, Lew Klein College of Media and Communication; PhD, University of Texas at Austin.

*Nancy E. Morris*, Professor Emerita, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of Pennsylvania.

*Katherine A. Mueller*, Associate Professor, Department of Advertising and Public Relations, Lew Klein College of Media and Communication; MFA, Temple University.

*Patrick D. Murphy*, Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, Ohio University.

*Wazhmah Osman*, Associate Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, New York University.

*Aron Pilhofer*, Associate Professor and the James B. Steele Chair in Journalism Innovation, Department of Journalism, Lew Klein College of Media and Communication; BA, University of Minnesota.

*Clemencia Rodriguez*, Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, Ohio University.

*Adrienne Shaw*, Associate Professor, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of Pennsylvania.

*Larry Stains*, Associate Professor of Practice, Department of Journalism, Lew Klein College of Media and Communication; MJ, Columbia University.

*Meghna Tallapragada*, Assistant Professor, Department of Advertising and Public Relations, Lew Klein College of Media and Communication; PhD, Cornell University.

*Karen M. Turner*, Associate Professor, Department of Journalism, Lew Klein College of Media and Communication; JD, Northwestern University School of Law.

*Barry Vacker*, Associate Professor of Instruction, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, University of Texas at Austin.

*Linn Washington*, Professor, Department of Journalism, Lew Klein College of Media and Communication; MSL, Yale Law School.

*Kristine Trever Weatherston*, Associate Professor of Instruction, Department of Media Studies and Production, Lew Klein College of Media and Communication; PhD, Virginia Commonwealth University.

*Andrea D. Wenzel*, Assistant Professor, Department of Journalism, Lew Klein College of Media and Communication; PhD, University of Southern California.

*Thomas Wright*, Associate Professor of Instruction, Department of Communication and Social Influence, Lew Klein College of Media and Communication; PhD, Purdue University.

*Laura Zaylea*, Associate Professor of Instruction, Department of Media Studies and Production, Lew Klein College of Media and Communication; MFA, San Francisco Art Institute.

## Communication for Development and Social Change MS

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the Master of Science in Communication for Development and Social Change.

### About the Program

The Master of Science in Communication for Development and Social Change (CDSC) is a 30-credit program designed to be completed in one year. The program focuses on using communication, media and digital platforms to empower communities, bring about social change and strengthen social justice. There is a pressing need for communication for social change experts who can foster communication within communities, governments, and nongovernmental and civil society organizations. This work requires specific expertise in using tools like strategic communication, communication campaigns, participatory interventions, managing and evaluating social change projects, media and information literacy training, and media and digital platforms for social change.

The MS curriculum provides a comprehensive overview of theory and practice in the field of communication for social change, including research methods tailored to the specific needs of social change professionals. Our curriculum emphasizes the importance of empowered communities, local voices and participatory strategies in social change processes. Students complete 18 credits of required core coursework, 9 credits in an area of specialization, and 3 credits of capstone field experience.

**Time Limit for Degree Completion:** 4 years, although the program is designed to be completed in one year

**Campus Location:** Main

**Full-Time/Part-Time Status:** While the degree program can be completed on a full- or part-time basis, full-time enrollment is strongly encouraged.

**Interdisciplinary Study:** The program is designed to be interdisciplinary in nature.

**Areas of Specialization:** Previously designed specializations include those listed below, but the possibilities are limitless as students are encouraged to design their own specializations based on their interests:

- Civic Engagement and Democratic Governance
- Climate Change and Adaptation
- Conflict, Peace and Human Rights
- Gender Equity
- Media Development and Advocacy
- Public Health

- Social Justice
- Sustainable Development

**Job Prospects:** The program prepares graduates as communication specialists who can help raise public understanding, build consensus and generate change by effectively using the range of communication alternatives available, whether by facilitating processes of dialogue among stakeholders or through media campaigns for governmental and non-governmental institutions.

Among the positions held by our alumni after graduation are:

- communications consultant for the United Nations
- communications manager for Read by 4th
- community outreach specialist for Stokes Creative Group
- digital communications specialist for UNICEF
- monitoring and evaluation officer for Greenpeace
- project manager for The Corps Network

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits before applying to the MS program.

**Financing Opportunities:** Merit scholarships are awarded on a competitive basis by the admissions committee. For information on endowed scholarships, please contact Klein's Graduate Office.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

Admission is open for the Fall term only. Applications are accepted after the deadline, but late applications cannot be guaranteed merit scholarship consideration.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who are able to provide insight into the applicant's potential for professional achievement and aptitude for graduate study. It is important that recommenders offer insight into the applicant's academic skills, including writing, analytical and critical thinking, and research abilities.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 1,000 words, present your strongest statement in the form of an essay about your interests and experiences in the field of Communication for Development and Social Change. The goal of your essay is to allow us to assess your institutional fit. Toward this end, please review the descriptions of our program, curriculum and faculty, also incorporating this content into your statement. You may use one or more of the following prompts as a starting point:

- What are your interests, experiences or academic research in the area of media and communication for development and social change, including your life experiences? The best candidates are people who can connect their life experiences and passions to their career goals.

- How will the MS in Communication for Development and Social Change advance your professional aspirations, intellectual objectives or social change/social justice goals?
- What is your experience as a social justice activist, public information campaign practitioner, community media practitioner or local journalist?
- How will you benefit from our program, and what will you contribute to our learning community?

**Standardized Test Scores:**

GRE: Optional. If provided, scores at or above the 65th percentile are expected.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master’s degree at a U.S. institution, must report scores within two years of the test date for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0

**Resume:** Current resume or curriculum vitae is required.

**Writing Sample:** If you elect to not submit GRE scores, you are required to submit one of the options below so that your readiness and ability/potential to engage rigorously with graduate-level work can be assessed:

1. A formal academic paper from your undergraduate work that represents your best academic writing. Please include a cover sheet on which you indicate:
  - a. your name,
  - b. the institution where you took the course for which the paper was produced,
  - c. the course number and title of the course for which the paper was written,
  - d. the professor for whom you wrote the paper, and
  - e. the term in which you took the course.
2. Professional writing samples that you produced in a professional capacity, such as a published report, research report, grant proposal, and/or assessment or evaluation report. Please include a cover sheet indicating:
  - a. what role you played in the publication’s production,
  - b. the institution that sponsored it, and
  - c. on what date the material was produced.

**Program Requirements**

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Year 1		Credit Hours
Summer II		
GDC 8001	Seminar in Media, Communication and Development	3
<b>Credit Hours</b>		<b>3</b>

Fall		
GDC 8003	Research Approaches in Communication, Development and Social Change	3
MSP 8254	Public Information Media Campaigns	3
MSP 8275	#ourmedia: Community, Activist, Citizens' and Radical Media	3
Specialization Course <sup>1</sup>		3
<b>Credit Hours</b>		<b>12</b>
Spring		
GDC 8002	Communication for Social Change Project Design	3
JRN 5213	Solutions Journalism	3
Two Specialization Courses <sup>1</sup>		6
<b>Credit Hours</b>		<b>12</b>
Summer		
GDC 9995	Master's Research Project	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Students choose three courses in one area of specialization. Coursework options can be identified by contacting the Program Director. In addition, courses from across the University may be selected by students as they design their own specializations.

**Culminating Event:**

*Capstone Course:*

GDC 9995 Master's Research Project is a hybrid course in which students meet with the course instructor early in the Summer term and then complete their field experiences independently during the summer under the supervision and evaluation of the instructor. Research projects can include internships with governmental and non-governmental organizations, investigative projects with socially responsible businesses, participation in community development initiatives, or media productions for social changes that allow students to acquire knowledge and new skills and become more reflective development practitioners.

**Contacts**

**Program Web Address:**

<https://www.temple.edu/academics/degree-programs/communication-for-development-and-social-change-ms-co-cdsc-ms>

**Department Information:**

Lew Klein College of Media and Communication  
 Office of Research and Graduate Studies  
 2020 N. 13th Street, 344 Annenberg Hall  
 Philadelphia, PA 19122-6015  
 kaitlin.pierce@temple.edu  
 215-204-8560

**Submission Address for Application Materials:**

<https://apply.temple.edu/Klein/>

**Department Contacts:**

*Director of Graduate Admissions:*  
 Kaitlin Pierce, EdD  
 kaitlin.pierce@temple.edu



215-204-8560

*Program Director:*

Clemencia Rodriguez, PhD

clemencia@temple.edu

215-204-5752

## Communication Management MS

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the Master of Science in Communication Management.

### About the Program

The MS in Communication Management is a professionally oriented program focused on deep exploration of communication principles and practices. It features coursework in key areas such as audience analysis, communication strategies for emerging media, organizational communication, and research and data synthesis. Emphasizing strategic communication in the workplace and public communication, this program prepares entry-level and mid-career professionals to engage in effective communication campaigns as well as handle conflict and crisis management.

The MS program is offered completely online through an exciting combination of instructional formats. Students learn through both online interaction with faculty and by engaging with learning resources that they may individually access at their convenience.

Although not necessary for successful completion of the program, students may choose to focus on one of our socially relevant concentrations: Conflict Management and Dispute Resolution, Public Relations, or Strategic Communication and Cross-Cultural Leadership. Concentrations are displayed on the transcript upon graduation.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The online program, which can be completed on a full- or part-time basis, is designed to be completed in one year. All courses are offered for seven weeks in synchronous or asynchronous formats, can be taken in any order, and have no prerequisites.

**Areas of Specialization:** Three optional concentrations are available to students in the Communication Management MS degree program:

- Conflict Management and Dispute Resolution
- Public Relations
- Strategic Communication and Cross-Cultural Leadership

**Job Prospects:** Graduates of the MS in Communication Management program have gained the effective executive skills to manage different organizational demands such as crisis management, cross-cultural conflict, employee dispute resolution, leading diverse teams, and responsible decision-making in both corporate and non-corporate institutions. They are prepared to serve in corporate and nonprofit organizations, public and government relations, and public and political advocacy.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits before applying to the MS program.

**Financing Opportunities:** Merit scholarships are awarded on a competitive basis by the admissions committee.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* February 15

*Spring:* November 1

Applications are accepted after the deadline, but late applications cannot be guaranteed merit scholarship consideration.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who are able to provide insight into the applicant's potential for professional achievement and aptitude for graduate study.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the baccalaureate degree at Temple University.

**Statement of Goals:** In approximately 1,000 words, explain:

- How the MS in Communication Management program will advance your career goals and intellectual objectives, and
- What interests, experiences, and academic or research achievements that you bring to the program.

This statement is used to assess your institutional fit, i.e., how you will benefit from our program and what you will contribute to our learning community. Toward this end, please review the descriptions of our program, curriculum and faculty, incorporating this content into your statement. The strongest statement integrates your answers to these prompts into a coherent essay.

**Standardized Test Scores:**

GRE: Optional. If provided, scores at or above the 65th percentile are expected.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0

**Resume:** Current resume or curriculum vitae required.

**Writing Sample:** If you elect to not submit GRE scores, you are required to submit one of the options below so that your readiness and ability/potential to engage rigorously with graduate-level work can be assessed:

1. Professional writing samples that you produced in a professional capacity, such as a project report, public relations release, or any internal communications. Please include a cover sheet indicating

the purpose of the piece, intended audience and if any analysis was done.

- Academic paper or published article. Please include a cover sheet identifying the course and term for which the academic paper was written or for what publication and on what date the material was published.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 31

Code	Title	Credit Hours
<b>Core Courses</b>		
CMGT 8101	Data Driven Insights	3
CMGT 8103	Organizational Communication	3
CMGT 8105	Social Responsibility in Corporations and Not-for-Profit Organizations	3
CMGT 8106	Communication Theory for Professionals	3
<b>Electives/Optional Concentration(s)</b>		
Select six courses from the following. Declaring a concentration is optional. A concentration is earned when all three courses in an area of study are successfully completed: <sup>1</sup>		18
<b>Conflict Management and Dispute Resolution</b>		
CMGT 5002	Leadership in Crises and Conflict Management	
CMGT 5101	Conflict Management Processes in the Workplace	
CMGT 5102	Designing Workplace Dispute Systems	
<b>Public Relations</b>		
CMGT 5201	Consulting and Consultation in Public Relations	
CMGT 5202	Storytelling through Innovation	
CMGT 5203	Law and Ethics in Public Relations	
<b>Strategic Communication and Cross-Cultural Leadership</b>		
CMGT 5001	Communicating Organizational Leadership	
CMGT 5003	Leading Diverse Teams	
CMGT 5004	Cross-Cultural Leadership	
<b>Directed Readings <sup>2</sup></b>		
CMGT 5583	Directed Readings in Communication Management	
<b>Capstone Course</b>		
CMGT 8109	Final Project	1
<b>Total Credit Hours</b>		<b>31</b>

1

Up to two concentrations may be declared.

2

Students may choose to take a directed readings course for elective credit, pending faculty approval. Approval from the program director is required to count CMGT 5583 toward a concentration.

### Culminating Event:

#### *Capstone Project:*

CMGT 8109 constitutes the final project in Communication Management. It requires students to solve a critical structural and/or procedural communication problem affecting an organization's ability to communicate efficiently or effectively at internal and/or external levels. The 20-minute video-recorded presentation allows students during their

final academic term to reflect on and summarize relevant concepts, practices and readings from their entire course of study.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/communication-management-ms-co-cmol-ms>

### Department Information:

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
kaitlin.pierce@temple.edu  
215-204-8560

### Submission Address for Application Materials:

<https://apply.temple.edu/Klein/>

### Department Contacts:

#### *Director of Graduate Admissions:*

Kaitlin Pierce, EdD  
kaitlin.pierce@temple.edu  
215-204-8560

#### *Program Director:*

Quaiser Abdullah, PhD  
quaiser@temple.edu  
215-204-6808

## Journalism MJ

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the Master of Journalism in Journalism.

### About the Program

Temple's one-year Master of Journalism program directly engages with the rich and diverse communities of Philadelphia. Coursework and reporting projects focus on the problems and opportunities of urban life. Hands-on multimedia work is combined with the study of journalism's evolving roles and practices. Students learn by experiencing what it is like to work in today's ever-changing media environment. In recognition of the exciting evolution underway in the news industry, the program is designed to help current and aspiring journalists develop into engaged and innovative professionals.

The program benefits greatly from its location at Temple University in the fourth-largest media market in the United States, one ripe with innovation. Philadelphia is full of journalistic initiatives, including startups and nonprofits that are rethinking metropolitan, niche and ethnic media. Students interact with journalists and innovators from these organizations. Students take advantage of rich reporting opportunities in the Philadelphia area, a city with a vibrant culture, a highly diverse population, and significant challenges common to other cities, including crime, housing, development controversies, economic inequity, educational equity and race relations. The Urban Reporting Lab and the master's research project provide opportunities for MJ students to

tackle such problems in innovative ways as they pursue their graduate education and seek to make a difference.

The one-year, 30-credit program is designed to provide rigorous training as a cohort experience, encouraging students to work together and learn from one another as well as Master of Journalism faculty, local journalists and other innovators. This process begins with an immersive experience in Philadelphia communities before the first academic term and ends with a master's research project in the summer term in which students design and complete a journalistic masterwork. The program requires three elective courses to be taken from among graduate and upper-level undergraduate offerings in journalism and across Klein College. Students may choose to develop a specialization through these electives, including specializations in data and investigative journalism, multimedia journalism and sports journalism.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** While the degree program can be completed on a full- or part-time basis, full-time enrollment is strongly encouraged.

**Areas of Specialization:** Coursework is demanding and prepares students to work as professional journalists in the media of their choice. Specialized training is available in broadcast journalism, community journalism, entrepreneurial journalism, investigative reporting, podcasting and various forms of digital journalism. Students develop a specialization through their elective courses and a self-guided master's research project.

**Job Prospects:** The program is dedicated to training professional practitioners in journalism and media careers. Former students have also found success as freelancers and entrepreneurs.

**Non-Matriculated Student Policy:** Non-matriculated students are encouraged to begin with introductory and required courses. If accepted to the program, those courses may be applied toward the degree program, provided grade requirements have been met. Consistent with Graduate School policy, students are permitted to take up to 9 credits before deciding whether to apply formally to the program.

**Financing Opportunities:** Merit scholarships are awarded on a competitive basis by the admissions committee.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 15

Admission is open for the Fall term only. Applications are accepted after the deadline, but late applications cannot be guaranteed merit scholarship consideration.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from college/university faculty members, professional supervisors or others familiar with the applicant's academic and professional competence. At least one letter should be from an academic reference.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required for admission. Applicants with undergraduate degrees in fields other than journalism and communication are welcome provided they can demonstrate sufficient interest in and proficiency with journalistic communication and practice.

**Statement of Goals:** In approximately 1,000 words, present your strongest statement, which integrates your answers to the prompts below into a coherent essay, to allow us to assess your institutional fit. Toward this end, please review the descriptions of our program, curriculum and faculty, also incorporating this content into your statement. The prompts include:

- Your interest in journalism and your view of its place in society;
- Your career goals in journalism; and
- Your interests, experiences, and academic or professional achievements that you bring to the program.

### Standardized Test Scores:

GRE: Optional. Scores submitted are preferred to be at least 65% on the verbal section with a writing score of at least 3.5. If you elect to not submit GRE scores, a writing sample is required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 105
- IELTS Academic: 7.0
- Duolingo: 110

**Resume:** Current resume or curriculum vitae is required.

**Writing Sample:** If you elect to not submit GRE scores, you are required to submit a writing sample, which is otherwise strongly encouraged. Published journalistic works (e.g., in professional outlets or college media) are preferred. You may also submit a formal academic paper from your undergraduate studies that represents your best writing. In this case, please indicate on a cover sheet when, for what course, and at which institution the paper was produced.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the MJ program, subject to approval of the Master of Journalism Committee. Requests to transfer credits must be submitted during the first term of matriculation so that the student's future curriculum can be planned. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Year 1		Credit Hours
Summer II		
JRN 5301	Introduction to Urban Journalism	3
<b>Credit Hours</b>		<b>3</b>

<b>Fall</b>		
JRN 5302	Urban Reporting Lab 1	3
JRN 5303	Journalism Concepts	3
JRN 5308	Multiplatform Journalism	3
JRN Elective		3
<b>Credit Hours</b>		<b>12</b>
<b>Spring</b>		
JRN 5305	Urban Reporting Lab 2	3
JRN 5306	Journalism and the Public Interest	3
Two JRN Electives		6
<b>Credit Hours</b>		<b>12</b>
<b>Year 2</b>		
<b>Summer I</b>		
JRN 9995	Master's Research Project	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>30</b>

**Culminating Event:***Capstone Project:*

JRN 9995 Master's Research Project constitutes the culminating event. Students complete an independent reporting project that results in a journalistic masterwork analogous to a thesis that will be pitched to a professional news organization, creating the foundation for a portfolio of published work.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/journalism-mj-co-jrn-mj>

**Department Information:**

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
kaitlin.pierce@temple.edu  
215-204-8560

**Submission Address for Application Materials:**

<https://apply.temple.edu/Klein/>

**Department Contacts:***Director of Graduate Admissions:*

Kaitlin Pierce, EdD  
kaitlin.pierce@temple.edu  
215-204-8560

*Program Director:*

Logan Molyneux, PhD  
logan@temple.edu  
215-204-3092

**Media and Communication PhD**

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the Doctor of Philosophy in Media and Communication.

**About the Program**

The PhD in Media and Communication offers a comprehensive curriculum in communication theory and research designed to provide advanced students with the breadth and depth of knowledge needed to make significant contributions in the academic and professional fields of mediated communication and, generally, communication.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Media and Communication students are expected to be "in residence" during their first year of study, excluding summer sessions. Thus, they must register for at least 9 credits in each of the two consecutive terms of Fall and Spring. Although the Graduate School allows for PhD programs to be completed on a full- or part-time basis, students receiving funding are required to maintain full-time status during their tenure in the program.

**Interdisciplinary Study:** The Media and Communication PhD program encourages interdisciplinary coursework, research and interactions among faculty and students with interest in the humanities and social sciences.

**Areas of Specialization:** Faculty members specialize and offer coursework in diverse areas related to media and communication, including communication effects and psychological processes; emerging media and technology; global media, social change and activism; journalism studies; media, identity and representation; the media industry, law and policies; political communication; and popular communication.

**Job Prospects:** The Media and Communication PhD program is designed to prepare graduates for work as professors in colleges and universities around the world. Graduates also hold a variety of positions in the communication and other commercial industries as well as in nonprofit organizations.

**Non-Matriculated Student Policy:** Non-matriculated students are restricted to taking MMC 9001 Communication Theory I and MMC 9002 Researching Communication I. These courses may only be taken with the permission of the instructor. If the student is admitted to the program, these courses may be applied toward the degree.

**Financing Opportunities:** As part of the admissions process, all applicants are considered for funding for a small number of competitive fellowships and teaching assistantships that carry a stipend and full tuition remission of up to 9 credits per term. Starting in their third year, funded students are given the opportunity to teach their own class as the instructor of record. Funding offers are made on or before March 15. April 15 is the final date to accept or decline the offer.

**Admission Requirements and Deadlines****Application Deadline:**

*Fall:* December 1

Admission is open for the Fall term only. All applications are evaluated together after the deadline date. Admitted students may defer entrance to the program for one year, but students may not begin the program in the Spring term unless there are truly extenuating circumstances, as

evaluated by the program director. Admission is based on several criteria, including:

- a match between the applicant's abilities and faculty's expectations;
- a match between the applicant's goals and the training and other attributes offered by the program;
- the applicant's academic and personal references;
- their demonstrated academic ability and research potential; and
- their standardized test scores.

APPLY ONLINE to this graduate program.

#### Letters of Reference:

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from evaluators, particularly college/university faculty, who can provide insight into your academic abilities and talents, as well as comment on your aptitude for graduate study.

**Master's Degree in Discipline/Related Discipline:** A master's degree in Communication, Media Studies, or in the humanities or social sciences is required. A minimum graduate GPA of 3.25 is expected. Those with scores near this minimum typically have their references scrutinized rigorously.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the baccalaureate degree at Temple University. A minimum undergraduate GPA of 3.0 is expected. Those with scores near this minimum typically have their references scrutinized rigorously.

**Statement of Goals:** In approximately 1,000 to 1,500 words, describe your specific interest in Temple's program, research goals, future career goals, and academic and research achievements. Your statement should name faculty with whom you are interested in working.

#### Standardized Test Scores:

GRE: Optional for Fall 2024 admission. Typically, only applicants who have a minimum total verbal and quantitative GRE score of 300, with a minimum verbal score of 150, are considered for admission. Candidates with scores near these minima typically have their references scrutinized rigorously.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores within two years of the test date for a standardized test of English that meet these minimums:

- TOEFL iBT: 96
- IELTS Academic: 7.0
- Duolingo: 110

**Resume:** Current resume or curriculum vitae is required.

**Interview:** In some cases, faculty may request an interview with applicants as part of evaluating their fit with the program and potential funding merit.

**Writing Sample:** Applicants should submit a formal academic paper that represents their best academic writing.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Master's: 48

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MMC 8985	Teaching in Higher Education: Communications	3
MMC 9001	Communication Theory I	3
MMC 9002	Researching Communication I	3
MMC 9003	Doctoral Colloquium	1
MMC 9005	Colloquium II (2 terms)	2
MMC 9101	Communication Theory II	3
MMC 9102	Researching Communication II	3
<b>Advanced Research Methods Course<sup>1</sup></b>		<b>3</b>
<b>Electives<sup>2</sup></b>		<b>21</b>
<b>Research Courses<sup>3</sup></b>		<b>6</b>
MMC 9994	Preliminary Examination Preparation	
MMC 9998	Pre-Dissertation Research	
MMC 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>48</b>

1

All students are required to take at least one advanced research methods course in Media and Communication. Beyond the first course, these advanced courses can be taken as electives. Students are encouraged to take additional advanced courses under the guidance of their program advisor.

2

Electives may be taken in the Lew Klein College of Media and Communication, with up to 6 graduate credits taken in other schools and colleges at Temple University.

3

The six credits must include at least two credits of MMC 9999, which requires an approved dissertation proposal.

### Culminating Events:

#### Preliminary Examinations:

Under the direction of an approved faculty committee, the PhD student must satisfactorily complete written and oral examinations prior to achieving formal PhD candidacy. Areas of examination and the constituency of the committee are tailored to the individual student. The subject areas are determined, in advance, by the student and their Doctoral Advisory Committee (DAC). The examinations consist of essay questions in three areas written by the members of the student's DAC. The exams are designed to demonstrate the student's critical and interpretive knowledge of specialized areas of media and communication. The exams evaluate the student's ability to apply specific research foci to related issues in the discipline.

The preliminary examinations should be taken no more than one term after the student completes the coursework component of the program. Students who are preparing to write their preliminary examinations should confirm a date and time with the chair of their DAC and register this information with Klein's Office of Research and Graduate Studies.

The student and chair receive confirmation of the date, time and, where applicable, room and proctor for the examinations.

The DAC evaluates the examinations. The student must answer every question in order to be evaluated. The evaluators look for breadth and depth of understanding of specific research areas; a critical application of that knowledge to specific media and communication issues; and an ability to write technical prose in a manner consistent with media and communication research. Each committee member votes to pass or fail the student. In order to pass, a majority of the committee members must agree that the exams have been satisfactorily completed.

If a student's answers are deemed suitable and complete, they may be passed without an oral defense. Otherwise, examinations may be defended orally approximately three weeks after they are written. Examinations must be completed and passed before the student defends their dissertation proposal.

*Proposal:*

With the guidance of their academic advisor, who is a member of the Media and Communication faculty, and at least two other committee members, the student proposes, conducts and creates a written report of an original, theoretically motivated research project. The proposal should consist of the context and background surrounding a particular research problem; identification of the theoretical and, if relevant, practical importance of the problem; an exhaustive survey and review of literature related to the problem; and a detailed methodological plan for investigating the problem. The proposal should be completed and approved no more than one term after the student completes coursework. It cannot be defended before the preliminary examinations are taken. Upon approval, a timeline for completing the investigation and writing process is established.

*Dissertation:*

The doctoral dissertation is an original empirical study that makes a significant contribution to the field of media and communication. It should expand the existing knowledge and demonstrate the student's knowledge of both research methods and their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the communication field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of media and communication; and be prepared for publication in a professional journal.

The DAC oversees the student's dissertation research and is comprised of at least three graduate faculty members. Two members, including the chair, must be from the Media and Communication program. Committee compositions must be approved by the Media and Communication faculty. The chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the DAC members, and informing the student of their academic progress.

The Dissertation Examining Committee (DEC) evaluates the student's dissertation and oral defense. This committee is composed of the DAC and at least one additional graduate faculty member from outside the Media and Communication program. The outside examiner should be identified no later than the beginning of the term in which the student will defend the dissertation. The DEC evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. DEC members vote to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of a committee, the new member must be approved by the program's faculty and registered with Klein's Office of Research and Graduate Studies and the Graduate School.

Students who are preparing to defend their dissertation should confirm a date and time with their DEC members and register with Klein's Office of Research and Graduate Studies at least 15 days before the defense. The date, time and room are arranged within two working days, and the student is forwarded the appropriate forms. After the defense has been set, the student must send a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," to the Graduate School at least 10 days before the defense. The Media and Communication program announces the defense via e-mail.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/media-and-communication-phd-co-mdcm-phd>

### Department Information:

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
nmckenna@temple.edu  
215-204-1497

### Submission Address for Application Materials:

<https://apply.temple.edu/Klein/>

### Department Contacts:

*Director of Graduate Admissions:*

Kaitlin Pierce, EdD  
kaitlin.pierce@temple.edu  
215-204-8560

*Program Director:*

Geoffrey Baym, PhD  
gdbaym@temple.edu  
215-204-4607

## Media Studies and Production MA

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the Master of Arts in Media Studies and Production.

### About the Program

In the Media Studies and Production master's program, we study and create media with an eye to the global media environment. We research new and legacy forms of media and media-related technologies; study industry practices and how they interact with governments, communities, other industries and social forces; and examine audiences and their dynamic relationships with media. We design and produce media that reflect big ideas about individual, community and cultural experience in a program that provides pathways to leadership in numerous careers: corporate and nonprofit communication, marketing and research, media

production, media management, academic research, and media publicity and advertising.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Departmental courses must constitute a minimum of 19 of the 36 credits required to graduate. Provided this requirement is met, students are free to take courses in other departments and pursue an interdisciplinary focus.

**Affiliation(s):** Department faculty members and students regularly present research at established communications associations, such as the Association for Education in Journalism and Mass Communication (AEJMC), Association of Internet Researchers (AoIR), Broadcast Education Association (BEA), Eastern Communication Association (ECA), International Association for Media and Communication Research (IAMCR), International Communication Association (ICA), and National Communication Association (NCA).

**Study Abroad:** Students can pursue opportunities for study away during the Summer semester.

**Areas of Specialization:** The program focuses on three areas of interest:

1. Communication Scholarship covers the history, economics, law, regulation and policy pertaining to broadcast, cable and new technology industries in both national and international contexts; social processes such as the psychology, sociology, cultural study and politics of both media and communications technology, particularly as related to their impact on everyday life; and the analysis of the behavior and management of communications systems, particularly in terms of the media, telecommunication industries, digital platforms and institutions.
2. Media Business covers corporate and nonprofit communications; media management, marketing and research; and media publicity and advertising.
3. Media Production covers TV, radio, digital platforms, multimedia production, gaming and emergent communication technologies.

**Job Prospects:** Given that all institutions engage with media in today's society, graduates find positions in academia, the corporate sector, government/public service, nonprofit organizations, journalism and entertainment media. Expertise gained in this program positions graduates for leadership positions.

**Non-Matriculated Student Policy:** Non-matriculated students are encouraged to begin with introductory and required courses. If accepted to the program, those courses may be applied toward the degree program, provided grade requirements have been met. Consistent with Graduate School policy, students are permitted to take up to 9 credits before deciding whether to apply formally to the program.

**Financing Opportunities:** Scholarships are awarded on a competitive basis by the admissions committee.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* February 15

Admission is open for the Fall term only. Applications are accepted after the deadline, but late applications cannot be guaranteed merit scholarship consideration.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from college/university faculty, professional supervisors or others familiar with the applicant's academic or professional competence. At least one letter should be from an academic reference.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Communication, Media Studies, or the Humanities or Social Sciences is required.

**Statement of Goals:** In approximately 1,000 words, explain:

- How the MA in Media Studies and Production will advance your research goals, career goals and intellectual objectives; and
- Your interests, experiences, and academic or research achievements that you bring to the program.

This statement is used to assess your institutional fit, i.e., how you will benefit from our program and what you will contribute to our learning community. Toward this end, please review the descriptions of our program, curriculum and faculty, and incorporate this content into your statement. The strongest statement integrates your answers to the above prompts into a coherent essay.

**Standardized Test Scores:**

GRE: Optional. Scores that are submitted are preferred to be at least 60% verbal and at least 25% quantitative. A writing score of at least 3.5 is recommended.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- Duolingo: 110

**Resume:** Current professional resume or curriculum vitae is required.

**Writing Sample/Production Portfolio:** If you elect to not submit GRE scores, you are required to submit one of the options below so that your readiness and ability/potential to engage rigorously with graduate-level work can be assessed:

1. A formal academic paper from your undergraduate work that represents your best academic writing. Please include a cover sheet on which you indicate:
  - a. your name,
  - b. the institution where you took the course for which the paper was produced,
  - c. the course number and title of the course for which the paper was written,

- d. the professor for whom you wrote the paper, and
  - e. the term in which you took the course.
2. Professional writing samples that you produced in a professional capacity, such as published news articles or press releases. Please include a cover sheet indicating in what publication and on what date the material was published.
  3. A production portfolio that includes professionally or academically produced video, audio or web material. Please submit an academic essay that explains how theory and research inform the production portfolio, indicating your role in the production, where the material was produced, and the date.

**Transfer Credit:** Up to 8 credits of graduate coursework may be transferred into the master's program, subject to the approval of the department's Graduate Faculty. To request the transfer of credits, a student must complete and submit a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms," to Klein's Office of Research and Graduate Studies during the first term of matriculation so that their future curriculum can be properly planned. Additional details on credit transfer are available in the MA manual. The maximum number of credits a student may transfer is 8.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 36*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MSP 5011	Introduction to Communication Concepts	3
MSP 5114	Communication Research Methods	3
MSP 9845	Masters Colloquium	1
Select at least one of the following:		3
MSP 5021	Media Institutions <sup>1</sup>	
MSP 5042	Media Technology and Culture <sup>2</sup>	
<b>Courses in Area of Interest <sup>2</sup></b>		<b>20</b>
<b>Research Course</b>		<b>6</b>
MSP 9333	Master Colloq/Comp Exam	
	or MSP 9996 MA Thesis/Project	
<b>Total Credit Hours</b>		<b>36</b>

1

MSP 5021 is only offered in the Fall term.

2

When required courses have been completed, students may pursue coursework in a focal area of their choice: Communication Scholarship, Media Business, or Media Production.

## Proposed Plan of Study Outlined by Year and Term

It is recommended that full-time students adhere to the following timeline for degree completion:

<b>Year 1</b>		
<b>Fall</b>		<b>Credit Hours</b>
MSP 5011	Introduction to Communication Concepts	3
MSP 5021	Media Institutions <sup>1</sup>	3
Or one course in area of interest <sup>2</sup>		
MSP 5114	Communication Research Methods	3
MSP 9845	Masters Colloquium	1
<b>Credit Hours</b>		<b>10</b>
<b>Spring</b>		
MSP 5042	Media Technology and Culture <sup>3</sup>	3
Select two courses in area of interest <sup>4</sup>		7
<b>Credit Hours</b>		<b>10</b>
<b>Year 2</b>		
<b>Fall</b>		
Select three courses in area of interest <sup>4</sup>		10
<b>Credit Hours</b>		<b>10</b>
<b>Spring</b>		
Select one of the following:		6
MSP 9333	Master Colloq/Comp Exam	
MSP 9996	MA Thesis/Project	
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>36</b>

1

MSP 5021 is only offered in the Fall term. If selected, MSP 5021 must be taken in the Fall of Year 1.

2

Coursework is taken in a focal area of the student's choice: Communication Scholarship, Media Business, or Media Production. One such course is taken in the Fall of Year 1 if the student does not choose to enroll in MSP 5021. All full-time students are required to take 10 credits in their first semester of study.

3

Students who did not take MSP 5021 in the Fall are required to enroll in MSP 5042 in the Spring. Those who have taken MSP 5021 and do not elect to also take MSP 5042 are required to take three courses in their area of interest, i.e., Communication Scholarship, Media Business, or Media Production, in the Spring of Year 1.

4

Students who elect to take comprehensive exams complete these credits through coursework taken in a focal area of the student's choice: Communication Scholarship, Media Business, or Media Production.

### Culminating Events:

*Master's Thesis or Project:*

Students can elect to complete a thesis or master's project.

*Comprehensive Examinations:*

Upon completion of all or most coursework and all other requirements, students who elect to not complete a thesis or master's project must take comprehensive examinations. The comprehensive examinations are a set of written tests on several subjects, that may, if necessary, be followed by oral discussions. As students near coursework completion, they should discuss with their advisor the constitution of the Comprehensive Examination Committee and the topics of the examinations. During this period, students are also advised to check with prospective faculty



members concerning their willingness and ability to serve as members on the committee. This should be done sometime during the students' third term of study. The comprehensive exams are taken during the final term of study.

The examinations cover the discipline of media and communication, not the precise coursework taken by a given student. Students are examined in three areas that they determine in conjunction with their committee. Each area is represented by the question(s) of one committee member. The questioner in each examination area may be understood to be the lead or main reader for that area. The three areas are chosen from Communication Behavior, Communication History, Communication Institutions, Communication Message Systems, Communication Research Methodology, Communication Theory and an optional area.

The form of the examinations is determined by the student and the Comprehensive Examination Committee. Each of the three examinations can be taken either in office or at home, either with or without the use of notes and/or books, and for a period of a few hours to a week. In all cases, the written portion of the examination must be completed within a 14-day period. In-office examinations may not exceed four hours.

Students must answer every question on the examination in order to be evaluated. Evaluators look for an understanding of core concepts, application of relevant materials, informed responses and careful writing. Additional standards may be applied by individual faculty members. All members of the Comprehensive Examination Committee evaluate each answer and convey their assessments to the committee chair within three weeks of receiving the examinations. First, each content area is graded on a pass/fail basis. To pass in a given area, the majority of committee members (i.e., no fewer than two) must accept the answer(s). Included in this majority approval must be that of the area examiner (i.e., the lead reader). Second, to pass the comprehensive examinations, the Comprehensive Examination Committee must also determine that the overall written (and oral, if required) performance across all questions and areas is adequate. Thus, it is possible that a student may discharge each area just passably but have such a weak overall performance that they fail the comprehensive examinations.

The examinations are scheduled by the student and their committee members. The student must complete all of the examinations within the 90 days following the approval of the student's Comprehensive Examination Committee. If 90 days elapse from the approval-of-committee date without completion, the process must be started again from the beginning. Examinations may be scheduled any time during the regular academic term, either Fall or Spring.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/media-studies-and-production-ma-co-msp-ma>

### Department Information:

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
kaitlin.pierce@temple.edu  
215-204-8560

## Submission Address for Application Materials:

<https://apply.temple.edu/Klein/>

## Department Contacts:

*Director of Graduate Admissions:*

Kaitlin Pierce, EdD  
kaitlin.pierce@temple.edu  
215-204-8560

*Program Director:*

Jan Fernback, PhD  
fernback@temple.edu  
215-204-3041

*Chairperson:*

Matthew Lombard, PhD  
lombard@temple.edu  
215-204-7182

## Graduate Certificate: Conflict Management and Dispute Resolution

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the graduate certificate in Conflict Management and Dispute Resolution.

### About the Certificate

The graduate certificate in Conflict Management and Dispute Resolution is designed for those interested in developing their skills to manage organizational demands for crisis management and resolution of employee disputes. This 12-credit certificate program provides graduate students with an in-depth understanding of the causes of cultural and professional disputes and enhances communication, management and conflict resolution techniques.

Because workplace conflicts are common, the presence of a professional who can manage and mitigate disputes benefits productivity, workflow and the organizational environment. In the certificate program, students learn to design, examine and utilize conflict management and dispute resolution systems in various organizations and fields, including government, healthcare, higher education and the private sector.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online, thereby offering students flexibility in accessing resources, submitting assignments and communicating online to accommodate demanding job constraints and challenging personal responsibilities

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. All courses are offered for seven weeks in synchronous or asynchronous formats, have no prerequisites, and can be taken in any order.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits before submitting an application.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must submit official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned. International applicants should also submit official documentation that validates completion and conferral of their degree(s).

**Statement of Goals:** Write a 250-500 word statement of purpose outlining your interest in seeking a graduate certificate as well as your academic and job-related experiences that are relevant to the program.

**Resume:** Current resume required.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
CMGT 5002	Leadership in Crises and Conflict Management	3
CMGT 5004	Cross-Cultural Leadership	3
CMGT 5101	Conflict Management Processes in the Workplace	3
CMGT 5102	Designing Workplace Dispute Systems	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/conflict-management-and-dispute-resolution-certificate-graduate-co-cmdr-grad>

### Department Information:

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
kaitlin.pierce@temple.edu  
215-204-8560

### Mailing Address for Application Materials:

Lew Klein College of Media and Communication  
344 Annenberg Hall (011-00)  
2020 N. 13th Street  
Philadelphia, PA 19122-6015

## Department Contacts:

*Director of Graduate Admissions:*

Kaitlin Pierce, EdD  
kaitlin.pierce@temple.edu  
215-204-8560

*Program Director:*

Dr. Quaiser Abdullah  
quaizer@temple.edu

## Graduate Certificate: Cultural Analytics

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the graduate certificate in Cultural Analytics.

### About the Certificate

The graduate certificate in Cultural Analytics at Temple University is an interdisciplinary effort by faculty members in the Tyler School of Art and Architecture, College of Education and Human Development, College of Liberal Arts, Lew Klein College of Media and Communication, Center for the Performing and Cinematic Arts, and College of Science and Technology, as well as librarians in Temple University Libraries and its Loretta C. Duckworth Scholars Studio. This certificate program trains students in humanistic and non-scientific fields in the use of computational methods to analyze cultural objects.

"Cultural Analytics" refers to the analysis of cultural objects assisted by computer technology and quantitative methods. Sometimes called "digital humanities," the field developed in response to the digitization of archival materials, books, museum objects and paintings, making it possible to analyze cultural objects using methods more familiar to computer scientists and statisticians than to humanists or qualitative social scientists.

Much of modern culture originates in digital form. Digital versions of traditional humanistic materials — artifacts, books, films, paintings and sculptures — are readily available for study. Graduate students who work with digital materials benefit from specialized training in managing and manipulating their materials so that they can take full advantage of the digital format. Students are prepared for advanced research in their discipline by allowing them to specialize in the specific skills that are most relevant to their research. Participants are encouraged to work within one of the following focal areas:

- Basic programming
- Data visualization
- Mapping and geographic information systems
- Research design and analysis
- Social media research
- Statistics
- Text encoding and analysis
- Virtual environments

The certificate program in Cultural Analytics facilitates work on a dissertation, thesis or culminating event by offering training in these technical skills along with the conceptual background needed to understand the opportunities and obstacles each method brings with it.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact a Klein College admissions advisor for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Cultural Analytics by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

*Fall and Spring* admissions are on a rolling basis.

To enroll in a given academic term, current students must apply no later than the add/drop deadline for that term. Students currently enrolled in a graduate degree program at Temple University must submit a personal statement of no more than 250 words and complete the Internal Application Form.

Applicants not currently enrolled at Temple are welcome, and applications are due August 1 for enrollment in the Fall term. Complete the External Application Form.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants already admitted to a graduate degree program at Temple University have demonstrated that they possess the required bachelor's degree. Applicants not currently enrolled in a Temple University graduate degree program and applicants enrolled in a graduate degree program at another university must submit official transcripts for all coursework taken since high school, whether or not a degree was earned from the institution(s). Evidence of the award of a baccalaureate degree from an accredited university with an undergraduate GPA of at least 3.0 on a 4.0 scale must be shown.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 9 for matriculated students; 10 for non-matriculated students

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CLA 5019	Introduction to Cultural Analytics <sup>1</sup>	3
MMC 9087	Cultural Analytics Practicum <sup>2</sup>	0-1
<b>Electives</b>		<b>6</b>
Select two from the following:		
Data Visualization		
GAD 5078	The Art of Infographics	
GUS 5073	Geovisualization <sup>3</sup>	
Mapping		
GUS 5062	Fundamentals of Geographical Information Systems	
GUS 8065	Cartographic Design	

Programming	
CIS 5015	Scripting for Sciences and Business
CIS 5016	Data Structures and Objects
Research Design	
ARCH 9580	Special Topics in Site and Context <sup>4</sup>
MMC 9206	Digital Qualitative Research Methods
SOC 9211	Graduate Data Analysis <sup>3</sup>
Social Media	
MMC 9700	Advanced Topic/MMC I <sup>4</sup>
MMC 9735	Emerging Media and Communication
MMC 9749	Social Media Analytics
Statistics	
EDUC 5325	Introduction to Statistics and Research
SOC 8211	Inferential and Multivariate Statistics <sup>5</sup>
Textual Data	
ENG 5401	Introduction to Digital Text Methods
REL 5801	Foundations in Digital Humanities for the Study of Religion
Virtual Environments	
ARCH 5011	Graduate Representation Intensive 1
ARCH 5012	Graduate Representation Intensive 2
ARCH 8133	Arch Research Seminar <sup>3 4</sup>

**Total Credit Hours** **9-10**

1

HIST 5152 Digital History may be substituted for CLA 5019 with the approval of the Certificate Program Director.

2

Students enrolled in a degree program register for the non-credit practicum through the certificate program's administrator. Non-matriculated students must find a faculty sponsor for their project and enroll in 1 credit of practicum.

3

This course has prerequisites.

4

This course requires approval of the Certificate Program Director as content for this course varies.

5

This is a 4-credit course.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/cultural-analytics-certificate-graduate-co-cuan-grad>

### Administering Unit:

Loretta C. Duckworth Scholars Studio  
Charles Library, 3rd Floor  
1900 N. 13th Street  
Philadelphia, PA 19122  
[digitalscholarship@temple.edu](mailto:digitalscholarship@temple.edu)

## Lead Academic Unit:

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
215-204-1497  
Fax: 215-204-0310

## Submission Address for Official Electronic Transcripts:

Marianne Moll  
Program Administrator  
marianne.moll@temple.edu

## Department Contacts:

*Certificate Program Information:*  
Dr. Adrienne Shaw  
Program Director  
ca-program@temple.edu

# Graduate Certificate: Public Relations

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the graduate certificate in Public Relations.

## About the Certificate

The graduate certificate in Public Relations is designed for those interested in learning how to effectively present public images and prepare for a career in a rapidly changing media landscape. This 12-credit certificate program is designed for current public relations professionals to further their expertise in the field, as well as for students who want to capitalize on growing trends in public relations before entering the industry.

Through communication theories and real-world practice, students gain an in-depth understanding of the vital components of public relations—from data and technology to consulting and ethics—to help them excel in the workplace. After completing the Public Relations certificate program, graduates are able to:

- present campaign ideas to executives through oral and written methods,
- become involved in high-level decision-making as a communications consultant,
- analyze and research how advances in technology are impacting the industry,
- understand the legal and ethical issues of public relations practices through various perspectives, and
- utilize digital tools to analyze key campaign metrics and results.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online, thereby offering students flexibility in accessing resources, submitting assignments and communicating online to accommodate demanding job constraints and challenging personal responsibilities

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. All courses are offered for seven weeks in synchronous or asynchronous formats, have no prerequisites, and can be taken in any order.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits before submitting an application.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must submit official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned. International applicants should also submit official documentation that validates completion and conferral of their degree(s).

**Statement of Goals:** Write a 250-500 word statement of purpose outlining your interest in seeking a graduate certificate as well as your academic and job-related experiences that are relevant to the program.

**Resume:** Current resume required.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
CMGT 5201	Consulting and Consultation in Public Relations	3
CMGT 5202	Storytelling through Innovation	3
CMGT 5203	Law and Ethics in Public Relations	3
CMGT 8101	Data Driven Insights	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/public-relations-certificate-graduate-co-pr-grad>

### Department Information:

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
kaitlin.pierce@temple.edu  
215-204-8560

## Mailing Address for Application Materials:

Lew Klein College of Media and Communication  
344 Annenberg Hall (011-00)  
2020 N. 13th Street  
Philadelphia, PA 19122-6015

## Department Contacts:

*Director of Graduate Admissions:*

Kaitlin Pierce, EdD  
kaitlin.pierce@temple.edu  
215-204-8560

*Program Director:*

Dr. Quaiser Abdullah  
quaizer@temple.edu

# Graduate Certificate: Strategic Communication and Cross-Cultural Leadership

LEW KLEIN COLLEGE OF MEDIA AND COMMUNICATION

Learn more about the graduate certificate in Strategic Communication and Cross-Cultural Leadership.

## About the Certificate

The graduate certificate in Strategic Communication and Cross-Cultural Leadership is designed for those interested in expanding their cross-cultural awareness and strategic competence to develop and manage collaboration in their organizations. The certificate provides students with leadership communication theory, as well as research and practice critical to increasingly diverse leadership contexts at the breakneck pace of changing media. The 12-credit Strategic Communication and Cross-Cultural Leadership graduate certificate is ideal for individuals aspiring to leadership positions, as well as those who currently hold leadership positions and want to increase their ability to deal with cross-cultural conflicts, manage diverse teams and make responsible decisions.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online, thereby offering students flexibility in accessing resources, submitting assignments and communicating online to accommodate demanding job constraints and challenging personal responsibilities

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. All courses are offered for seven weeks in synchronous or asynchronous formats, have no prerequisites, and can be taken in any order.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits before submitting an application.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must submit official undergraduate and graduate transcripts from all accredited institutions attended and/or from which credit was earned. International applicants should also submit official documentation that validates completion and conferral of their degree(s).

**Statement of Goals:** Write a 250-500 word statement of purpose outlining your interest in seeking a graduate certificate as well as your academic and job-related experiences that are relevant to the program.

**Resume:** Current resume required.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
CMGT 5001	Communicating Organizational Leadership	3
CMGT 5002	Leadership in Crises and Conflict Management	3
CMGT 5003	Leading Diverse Teams	3
CMGT 5004	Cross-Cultural Leadership	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/strategic-communication-and-cross-culture-leadership-certificate-graduate-co-scl-grad>

### Department Information:

Lew Klein College of Media and Communication  
Office of Research and Graduate Studies  
2020 N. 13th Street, 344 Annenberg Hall  
Philadelphia, PA 19122-6015  
kaitlin.pierce@temple.edu  
215-204-8560

## Mailing Address for Application Materials:

Lew Klein College of Media and Communication  
344 Annenberg Hall (011-00)  
2020 N. 13th Street  
Philadelphia, PA 19122-6015

## Department Contacts:

*Director of Graduate Admissions:*

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*Program Director:*

Dr. Quaiser Abdullah

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## Lewis Katz School of Medicine

Lewis Katz School of Medicine (LKSOM) at Temple University, located on the Health Sciences Center campus, is dedicated to excellence in education, research and patient care achieved by faculty, staff and students who represent the diversity of society. LKSOM takes pride in the excellence of its teaching, research and service programs by:

- providing education that is patient-centered, instilling in learners the school's ethic of human service and lifelong learning;
- engaging in research that advances and integrates basic and clinical science; and
- administering patient care with compassion and understanding, utilizing contemporary knowledge and techniques.

Located in the historic city of Philadelphia where American medicine has its roots, LKSOM has been known for its faculty's uncommon interest in and concern for students and its commitment to the highest quality of care for all people. On November 1, 2007, the Medical School broke ground on a new home. The 11-story, 480,000-square-foot glass and brick structure opened in May 2009 and has proven to be highly functional for both education and research.

On September 16, 1901, Russell H. Conwell, founder of Temple University, opened a medical school, lit by gaslight, for the "common man." The faculty consisted of 27 lecturers, demonstrators and instructors. Medical practitioners taught classes at College Hall, next to the Baptist Temple, on present-day Main Campus. Samaritan Hospital, two miles up Broad Street, was the site of clinical instruction. Anatomical dissections on cadavers, which were delivered in pickle barrels, were performed in a hayloft. According to admissions materials, "matriculates of academic or scientific colleges, or graduates of reputable high schools of the first grade, or a normal school established by State authority, of both sexes, are admitted to the first year class without examination." In the inaugural class, 31 students began the five-year program that included:

- classes held on nights and weekends to accommodate students' day jobs,
- 15 required textbooks,
- total tuition and fees of a modest \$635, and
- a curriculum requiring 700 hours of work each year.

From such modest beginnings, LKSOM has emerged as a school of national reputation. Nationally ranked by *U.S. News & World Report*, the Lewis Katz School of Medicine at Temple University prepares students for a rewarding career in medical practice or research. The combined energy created by enthusiastic faculty, state-of-the-art technology, and soaring new facilities makes Temple an exciting place to study medicine today.

## Graduate and Professional Programs and Certificates

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- Biomedical Sciences PhD (p. 460)
- Medicine MD (p. 463)
- Physician Assistant MMS (p. 465)
- Urban Bioethics MA (p. 468)

- Graduate Certificate: Narrative Medicine (p. 470)
- Graduate Certificate: Urban Bioethics (p. 471)

## Graduate Faculty

*Michael V. Autieri*, Professor, Department of Lemole Center for Integrated Lymphatics Research, Lewis Katz School of Medicine; PhD, Hahnemann University.

*Mary F. Barbe*, Professor, Department of Center for Translational Medicine, Lewis Katz School of Medicine; PhD, Wake Forest University.

*Richard H. G. Baxter*, Assistant Professor, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; PhD, University of Chicago.

*Lucia Borriello*, Assistant Professor, Department of Cancer and Cellular Biology, Lewis Katz School of Medicine; PhD, University of Paris.

*Tricia Helen Burdo*, Professor, Department of Center for Neurovirology and Gene Editing, Lewis Katz School of Medicine; PhD, Penn State College of Medicine.

*Bettina A. Buttaro*, Associate Professor, Department of Biomedical Education and Data Science, Lewis Katz School of Medicine; PhD, University of Minnesota.

*Marion M. Chan*, Associate Professor, Department of Biomedical Education and Data Science, Lewis Katz School of Medicine; PhD, Cornell University Medical College.

*Parkson Lee-Gau Chong*, Professor, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; PhD, University of Illinois at Urbana-Champaign.

*Judith Daniels*, Associate Professor, Department of Biomedical Education and Data Science, Lewis Katz School of Medicine; PhD, University of North Carolina at Chapel Hill.

*Satoru Eguchi*, Professor, Department of Cardiovascular Research Center, Lewis Katz School of Medicine; MD, Tohoku University School of Medicine, PhD, Tokyo Medical and Dental University.

*Toby K. Eisenstein*, Professor, Department of Center for Substance Abuse Research, Lewis Katz School of Medicine; PhD, Bryn Mawr College.

*John Elrod*, Associate Professor, Department of Cardiovascular Research Center, Lewis Katz School of Medicine; PhD, Albert Einstein College of Medicine.

*Nora Engel*, Associate Professor, Department of Fels Cancer Institute for Personalized Medicine, Lewis Katz School of Medicine; PhD, University of Buenos Aires.

*Concepcion Estaras*, Assistant Professor, Department of Center for Translational Medicine, Lewis Katz School of Medicine; PhD, University of Barcelona.

*Arthur Feldman*, Laura H. Carnell Professor, Department of Cardiovascular Sciences, Lewis Katz School of Medicine; MD, PHD, Louisiana State University.

*Silvia Fossati*, Associate Professor, Department of Alzheimer's Center at Temple, Lewis Katz School of Medicine; PhD, University of Florence.

*Gianluca Gallo*, Professor, Department of Neural Sciences, Lewis Katz School of Medicine; PhD, University of Illinois.

*Ana Gamero*, Associate Professor, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; PhD, University of South Florida.

*Glenn Stephen Gerhard*, Professor and the Joseph and Rebecca Goodfriend Endowed Chair in Genetics, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; MD, The Pennsylvania State University.

*Kathleen M. Giangiacomo*, Associate Professor, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; PhD, University of Pennsylvania.

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*Dale S. Haines*, Associate Professor, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; PhD, Hahnemann University.

*Wen-Zhe Ho*, Professor, Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine; MD, Wuhan University School of Medicine.

*Steven R. Houser*, Professor, Department of Cardiovascular Research Center, Lewis Katz School of Medicine; PhD, Temple University.

*Wenhui Hu*, Professor, Department of Center for Metabolic Disease Research, Lewis Katz School of Medicine; MD, PhD, Peking Union Medical College and Chinese Academy of Medical Science.

*Christian Hurtz*, Assistant Professor, Department of Fels Cancer Institute for Personalized Medicine, Lewis Katz School of Medicine; PhD, Albert-Ludwigs-Universität Freiburg im Breisgau.

*Liselotte Jensen*, Associate Professor, Department of Center for Inflammation and Lung Research, Lewis Katz School of Medicine; PhD, University of Aarhus.

*Shin Hyeok Kang*, Assistant Professor, Department of Shriners Hospitals Pediatric Research Center, Lewis Katz School of Medicine; PhD, Johns Hopkins University School of Medicine.

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*Mohsin Khan*, Assistant Professor, Department of Cardiovascular Sciences, Lewis Katz School of Medicine; PhD, University of the Punjab.

*Laurie Kilpatrick*, Professor, Department of Center for Inflammation and Lung Research, Lewis Katz School of Medicine; PhD, University of Pennsylvania.

*Seonhee Kim*, Associate Professor, Department of Shriners Hospitals Pediatric Research Center, Lewis Katz School of Medicine; PhD, Rutgers University.

*Lynn Kirby*, Professor, Department of Center for Substance Abuse Research, Lewis Katz School of Medicine; PhD, University of Pennsylvania.

*Raj Kishore*, Professor, Department of Center for Translational Medicine, Lewis Katz School of Medicine; PhD, Lucknow University.

*Walter J. Koch*, Professor and the William Wikoff Smith Endowed Chair in Cardiovascular Medicine, Department of Center for Translational Medicine, Lewis Katz School of Medicine; PhD, University of Cincinnati College of Medicine.

*Beata Kosmider*, Professor, Department of Center for Inflammation and Lung Research, Lewis Katz School of Medicine; PhD, University of Lodz.

*Barbara Krynska*, Research Associate Professor, Department of Shriners Hospitals Pediatric Research Center, Lewis Katz School of Medicine; PhD, Medical University of Silesia.

*Satya P. Kunapuli*, Professor, Department of Sol Sherry Thrombosis Research Center, Lewis Katz School of Medicine; PhD, Indian Institute of Science.

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*Victor Luna*, Assistant Professor, Department of Alzheimer's Center at Temple, Lewis Katz School of Medicine; PhD.

*Grace X. Ma*, Laura H. Carnell Professor, Department of Center for Asian Health, Lewis Katz School of Medicine; PhD, University of Oklahoma.

*Sadia Mohsin*, Assistant Professor, Department of Cardiovascular Research Center, Lewis Katz School of Medicine; PhD, University of the Punjab.

*Marc Monestier*, Professor, Department of Biomedical Education and Data Science, Lewis Katz School of Medicine; MD, PhD, University of Lyon.

*Henry P. Parkman*, Professor, Department of Medicine, Lewis Katz School of Medicine; MD, Case Western Reserve University.

*Helen E. Pearson*, Associate Professor, Department of Biomedical Education and Data Science, Lewis Katz School of Medicine; PhD, Medical College of Pennsylvania.



*Yuri Persidsky*, Professor, Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine; MD, PhD, Kiev State Medical Institute.

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*Swayam Prabha*, Associate Professor, Department of Fels Cancer Institute for Personalized Medicine, Lewis Katz School of Medicine; PhD, University of Nebraska Medical Center.

*Domenico Praticò*, Professor and the Scott Richards North Star Charitable Foundation Chair for Alzheimer's Research, Department of Alzheimer's Center at Temple, Lewis Katz School of Medicine; MD, University of Roma, La Sapienza Medical School.

*Servio Ramirez*, Professor, Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine; PhD, University of Rochester School of Medicine and Dentistry.

*A. Koneti Rao*, Sol Sherry Professor, Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine; MBBS, All India Institute of Medical Sciences.

*Scott M. Rawls*, Professor, Department of Center for Substance Abuse Research, Lewis Katz School of Medicine; PhD, East Carolina University School of Medicine.

*Victor Rizzo*, Professor, Department of Cardiovascular Research Center, Lewis Katz School of Medicine; PhD, University of Medicine and Dentistry of New Jersey, New Jersey Medical School.

*Thomas J. Rogers*, Professor, Department of Center for Inflammation and Lung Research, Lewis Katz School of Medicine; PhD, University of Wisconsin-Madison.

*Slava Rom*, Assistant Professor, Department of Pathology and Laboratory Medicine, Lewis Katz School of Medicine; PhD, Ben-Gurion University of the Negev.

*Brad S. Rothberg*, Professor, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; PhD, University of Florida.

*Abdelkarim Sabri*, Professor, Department of Cardiovascular Research Center, Lewis Katz School of Medicine; PhD, Rene Descartes University.

*Mahmut Safak*, Associate Professor, Department of Center for Neurovirology and Gene Editing, Lewis Katz School of Medicine; PhD, Thomas Jefferson University.

*Umadevi Sajjan*, Associate Professor, Department of Center for Inflammation and Lung Research, Lewis Katz School of Medicine; PhD, University of Mysore.

*Carmen Sapienza*, Professor, Department of Fels Cancer Institute for Personalized Medicine, Lewis Katz School of Medicine; PhD, Dalhousie University.

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*Alexander Y. Tsygankov*, Associate Professor, Department of Sol Sherry Thrombosis Research Center, Lewis Katz School of Medicine; PhD, Bach Institute of Biochemistry, Moscow.

*Ronald F. Tuma*, George H. Stewart Professor, Department of Center for Substance Abuse Research, Lewis Katz School of Medicine; PhD, Temple University.

*Çagla Tükel*, Associate Professor, Department of Center for Microbiology and Immunology, Lewis Katz School of Medicine; PhD, Ankara University.

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*Sara Jane Ward*, Assistant Professor, Department of Center for Substance Abuse Research, Lewis Katz School of Medicine; PhD, Wake Forest University.

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*Sheng Wu*, Associate Professor, Department of Center for Metabolic Disease Research, Lewis Katz School of Medicine; PhD, University of Victoria.

*Ling Yang*, Assistant Professor, Department of Medical Genetics and Molecular Biochemistry, Lewis Katz School of Medicine; PhD, Chinese Academy of Sciences.

*Xiao-Feng Yang*, Professor, Department of Cardiovascular Research Center, Lewis Katz School of Medicine; MD, PhD, University of Montreal.

*Jun Yu*, Associate Professor, Department of Center for Metabolic Disease Research, Lewis Katz School of Medicine; MD, Yale University School of Medicine.

*M. Raza Zaidi*, Associate Professor, Department of Fels Cancer Institute for Personalized Medicine, Lewis Katz School of Medicine; PhD, Rutgers University, Robert Wood Johnson Medical School.

## Biomedical Sciences MS

LEWIS KATZ SCHOOL OF MEDICINE

### About the Program

The MS program is aimed at broad interdisciplinary training in the major areas of Biomedical Sciences. The goal is to train students in the theory and practice of Biomedical Sciences for eventual service in research and teaching. Students are instructed in diverse laboratory techniques through a series of lecture and laboratory courses.

Under the guidance of a faculty member, thesis students are provided with a program of experimental research. Two options are available:

- Thesis Track, with a transcribed concentration in the area of thesis research. Five areas of concentration or clusters are available: Cancer Biology and Genetics, Infectious Disease and Immunity, Molecular and Cellular Biosciences, Neuroscience, and Organ Systems and Translational Medicine. Students complete and defend a master's thesis under the supervision of a faculty member.
- Non-Thesis Track, which is in General Biomedical Sciences. Students complete didactic coursework in each of the five cluster areas.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Health Sciences Center. With the permission of the student's Advisory Committee, elective courses not offered at HSC may be taken at other campuses.

**Full-Time/Part-Time Status:** The MS degree program is designed as a full-time day program of study to be completed in 20 to 24 months.

**Interdisciplinary Study:** The graduate program in Biomedical Sciences is interdisciplinary and emphasizes translational research. Students have the opportunity to work with faculty in disease-based research centers in the Lewis Katz School of Medicine, including the Center for Inflammation and Lung Research; Center for Metabolic Disease Research; Center for Neurovirology and Gene Editing; Center for Substance Abuse Research; Center for Translational Medicine; Comprehensive NeuroAIDS Center; Fels Cancer Institute for Personalized Medicine; Independence Blue Cross Cardiovascular Research Center; Shriners Hospitals Pediatric Research Center; Sol Sherry Thrombosis Research Center; and Temple Autoimmunity Center.

**Ranking:** In 2023, *U.S. News & World Report* ranked the Lewis Katz School of Medicine at Temple University number 68 in Research and among the Best Medical Schools.

**Areas of Specialization:** This interdisciplinary Biomedical Sciences graduate program offers five areas of concentration for students who plan to earn the MS with a thesis:

- Cancer Biology and Genetics
- Infectious Disease and Immunity
- Molecular and Cellular Biosciences
- Neuroscience
- Organ Systems and Translational Medicine

**Job Prospects:** This well-balanced program has been designed to be individually tailored to meet the interests and needs of each student and to fully prepare each student for a Biomedical Sciences career in academia, industry and government. The graduate program is designed to provide training in the theory and practice of Biomedical Sciences for eventual placement in research and teaching positions.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and approval from the Office of Graduate Studies at the Lewis Katz School of Medicine.

**Financing Opportunities:** Students may visit the Student Financial Services website for financial aid information.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: February 15

All applicants to the MS program must apply via BioMedical's Centralized Application Service (BioMedCAS). The system can be accessed at <https://biomedcas2024.liaisoncas.com/applicant-ux/#/login>. Applicants should check their application status on the BioMedCAS portal often and inquire directly of BioMedCAS about receipt of materials.

A supplemental application is also required to be submitted directly to Temple University. Submission of the supplemental application generates the applicant's TUID number. The BioMedCAS application will not be considered without the assigned TUID.

### Letters of Reference:

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from faculty and supervisors of research experiences.

**Coursework Required for Admission Consideration:** Applicants should have undergraduate training in the life sciences such as Biochemistry, Biology, Cell Biology, or Molecular Biology and Genetics. Students are also expected to have training in Chemistry and Mathematics.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in the Biological or Chemical Sciences is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's Biomedical Sciences graduate program, research interests and past experience, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional. Students are not required to submit standardized scores, including GRE or MCAT scores, to supplement their application.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the MS program in Biomedical Sciences. The completed courses must be equivalent in content to coursework offered at Temple, and the grades earned must be a "B" or better in order to transfer credits. The Associate Dean reviews the syllabus from the completed course(s) to determine equivalency and makes the recommendation to accept the credits for transfer.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30 Thesis Track or 36 Non-Thesis Track

Required Courses:

## Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
BMSC 8101	Molecules to Cells	6
BMSC 8102	Experimental Design and Biostatistics	1
BMSC 8103	Scientific Integrity and Bioethics	1
BMSC 8201	Organ Systems: Function, Dysfunction and Therapeutics	4
BMSC 8202	Scientific Communications	1
BMSC 8203	Introduction to Bioinformatic Tools and Applications	1
Concentration-Specific Student Seminar and Journal Club (2 terms) <sup>2</sup>		2
<b>Basic Elective</b>		
Select one from the following:		2
BMSC 8205	Cell Structure & Function	
BMSC 8206	Molecular, Cellular and Systems Signal Transduction	
BMSC 8207	Molecular Approaches to Research	
<b>Concentration-Specific Advanced Electives</b> <sup>3</sup>		4
<b>Research Courses</b>		
BMSC 9991	Biomedical Science Research	1
BMSC 9996	Master's Thesis	7
<b>Total Credit Hours</b>		<b>30</b>

1

All students in the Biomedical Sciences program participate in a common first-year interdisciplinary experience that includes the core courses identified.

2

To complete this requirement, students select the course from the following that aligns with their area of concentration: BMSC 8500 Cancer Biology and Genetics Student Seminar and Journal Club, BMSC 8600 Infectious Disease and Immunity Student Seminar and Journal Club, BMSC 8700 Molecular and Cellular Biosciences Student Seminar and Journal Club, BMSC 8800 Neuroscience Student Seminar and Journal Club, or BMSC 8900 Organ Systems and Translational Medicine Student Seminar and Journal Club.

3

Students select approved courses identified in the grid below for their area of concentration. One basic elective not taken to complete the "Basic Elective" requirement may be substituted for an advanced elective to fulfill this requirement.

## Approved Advanced Electives by Area of Concentration

Code	Title	Credit Hours
<b>Cancer Biology and Genetics</b>		
BMSC 8502	Cancer Biology	
BMSC 8503	Genetics and Epigenetics	
<b>Infectious Disease and Immunity</b>		
BMSC 8602	The Biology of the Immune Response	

BMSC 8603	Molecular Genetics of Human Viruses
BMSC 8604	Cellular and Molecular Basis of Host-Microbe Interactions

### Molecular and Cellular Biosciences

BMSC 8703	RNA and its Role in Gene Expression
BMSC 8704	Molecular Physiology of Ion Signaling
BMSC 8706	Structure and Dynamics of Biomolecules and Assemblies

### Neuroscience

BMSC 8802	Essentials of Neuroscience <sup>1</sup>
BMSC 8803	Molecular and Cellular Neuroscience
BMSC 8804	Neuropharmacology
BMSC 8805	Pharmacology of Drugs of Abuse
BMSC 8806	Translational Science of Nervous System Diseases

### Organ Systems and Translational Medicine

BMSC 8902	Mechanisms of Cardiovascular Pathophysiology
BMSC 8903	Hemostasis and Thrombosis
BMSC 8904	Translational Pulmonary Physiology - Experimental Basis
BMSC 8905	Advanced Pharmacology and Translational Medicine
BMSC 8906	Development, Function and Diseases of the Musculoskeletal System
BMSC 8907	Organ Metabolism - Molecular Pathology and Experimental Models

1

Students who select Neuroscience as their concentration are required to complete BMSC 8802 as one of their advanced electives.

## Non-Thesis Coursework Track

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
BMSC 8101	Molecules to Cells	6
BMSC 8102	Experimental Design and Biostatistics	1
BMSC 8103	Scientific Integrity and Bioethics	1
BMSC 8104	Introduction to Laboratory Research I	1
BMSC 8201	Organ Systems: Function, Dysfunction and Therapeutics	4
BMSC 8202	Scientific Communications	1
BMSC 8203	Introduction to Bioinformatic Tools and Applications	1
BMSC 8204	Introduction to Laboratory Research II	1
Student Seminar and Journal Club (2 terms) <sup>2</sup>		2
<b>Basic Elective</b>		
Select one from the following:		2
BMSC 8205	Cell Structure & Function	
BMSC 8206	Molecular, Cellular and Systems Signal Transduction	
BMSC 8207	Molecular Approaches to Research	
<b>Advanced Electives</b> <sup>3</sup>		<b>16</b>
<b>Total Credit Hours</b>		<b>36</b>

1

All students in the Biomedical Sciences program participate in a common first-year interdisciplinary experience that includes the core courses identified.

2

To complete this requirement, students select from BMSC 8500 Cancer Biology and Genetics Student Seminar and Journal Club, BMSC 8600 Infectious Disease and Immunity Student Seminar and Journal Club, BMSC 8700 Molecular and Cellular Biosciences Student Seminar and Journal Club, BMSC 8800 Neuroscience Student Seminar and Journal Club, or BMSC 8900 Organ Systems and Translational Medicine Student Seminar and Journal Club.

3

Students fulfill this requirement by selecting approved courses identified in the grid above. At least one course must be taken in each of the five areas of concentration: Cancer Biology and Genetics, Infectious Disease and Immunity, Molecular and Cellular Biosciences, Neuroscience, and Organ Systems and Translational Medicine. Basic electives not taken to complete the "Basic Elective" requirement may be substituted for advanced electives to fulfill this requirement.

## Non-Thesis Project Track

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
BMSC 8101	Molecules to Cells	6
BMSC 8102	Experimental Design and Biostatistics	1
BMSC 8103	Scientific Integrity and Bioethics	1
BMSC 8104	Introduction to Laboratory Research I	1
BMSC 8201	Organ Systems: Function, Dysfunction and Therapeutics	4
BMSC 8202	Scientific Communications	1
BMSC 8203	Introduction to Bioinformatic Tools and Applications	1
Student Seminar and Journal Club (2 terms) <sup>2</sup>		2
<b>Basic Elective</b>		
Select one from the following:		2
BMSC 8205	Cell Structure & Function	
BMSC 8206	Molecular, Cellular and Systems Signal Transduction	
BMSC 8207	Molecular Approaches to Research	
<b>Advanced Electives</b> <sup>3</sup>		<b>12</b>
<b>Research Course</b>		
BMSC 9995	Master's Project (2 terms) <sup>4</sup>	5
<b>Total Credit Hours</b>		<b>36</b>

1

All students in the Biomedical Sciences program participate in a common first-year interdisciplinary experience that includes the core courses identified.

2

To complete this requirement, students select from BMSC 8500 Cancer Biology and Genetics Student Seminar and Journal Club, BMSC 8600 Infectious Disease and Immunity Student Seminar and Journal Club, BMSC 8700 Molecular and Cellular Biosciences Student Seminar and Journal Club, BMSC 8800 Neuroscience Student Seminar and Journal Club, or BMSC 8900 Organ Systems and Translational Medicine Student Seminar and Journal Club.

3

Students fulfill this requirement by selecting approved courses identified in the grid above. At least one course must be taken in each of the five areas of concentration: Cancer Biology and Genetics, Infectious Disease and Immunity, Molecular and Cellular Biosciences, Neuroscience, and Organ Systems and Translational Medicine.

4

This course is taken under the direction of a faculty mentor. All BMSC 9995 credits must be earned under the direction of the same faculty mentor.

### Culminating Event:

#### Thesis:

For the [Thesis Track](#), the thesis must be based on an original research project. It should demonstrate the student's familiarity with laboratory techniques related to the research project and the ability to evaluate critically the literature in the student's chosen area. The student submits the thesis in complete form not less than 14 days prior to the date of the final examination. The thesis must have been read and approved by the thesis advisor prior to distribution. The student should confirm a time and date for the thesis defense with the Final Examination Committee.

The final examination consists of a defense of the student's thesis to demonstrate competence within the field of the thesis and closely related areas. The student's Advisory Committee votes to pass or fail the thesis and the defense at the conclusion of the presentation. If the student must make revisions, those changes must be approved as arranged by the Committee.

Note that the [Non-Thesis Track](#) has no culminating event except for successful completion of coursework. Students may elect to gain research experience within a laboratory.

## Contacts

### Program Web Address:

<https://medicine.temple.edu/education/biomedical-sciences-graduate-program>

### Department Information:

Biomedical Sciences Graduate Program  
Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB 1111  
Philadelphia, PA 19140  
tusmgrad@temple.edu  
215-707-2423  
215-707-6687

### Submission Address for Application Materials:

<https://biomedcas2024.liasoncas.com/applicant-ux/#/login>

## Submission Address for Supplemental Temple University Application:

[https://apply.temple.edu/MED\\_GRAD/](https://apply.temple.edu/MED_GRAD/)

### Department Contacts:

#### Admissions and Program Coordinators:

Dianne Soprano, PhD  
Associate Dean for Graduate and MD/PhD Programs  
dsoprano@temple.edu  
215-707-3266

Scott K. Shore, PhD  
Associate Dean for Graduate Studies and Specialty Programs  
sks@temple.edu  
215-707-5072

## Biomedical Sciences PhD

LEWIS KATZ SCHOOL OF MEDICINE

### About the Program

The PhD program is aimed at broad interdisciplinary and translational training in Biomedical Sciences and provides in-depth training in one of five areas of concentration. All students participate in an interdisciplinary first-year experience and then select an area of concentration from among Cancer Biology and Genetics, Infectious Disease and Immunity, Molecular and Cellular Biosciences, Neuroscience, and Organ Systems and Translational Medicine. The curriculum provides students with an interdisciplinary approach to research training, offering new pathways for learning and discovery. The PhD program is intended to educate premier biomedical scientists who will be tomorrow's leaders in research, education and government.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Health Sciences Center. With the permission of the student's Research Advisory Committee, elective courses not offered at HSC may be taken at other campuses.

**Full-Time/Part-Time Status:** The PhD degree program is designed as a full-time day program of study.

**Interdisciplinary Study:** The graduate program in Biomedical Sciences is interdisciplinary and emphasizes translational research. Students have the opportunity to work with faculty in disease-based research centers at the Lewis Katz School of Medicine, including the Center for Inflammation and Lung Research; Center for Metabolic Disease Research; Center for Neurovirology and Gene Editing; Center for Substance Abuse Research; Center for Translational Medicine; Comprehensive NeuroAIDS Center; Fels Cancer Institute for Personalized Medicine; Independence Blue Cross Cardiovascular Research Center; Shriners Hospitals Pediatric Research Center; Sol Sherry Thrombosis Research Center; and Temple Autoimmunity Center.

**Ranking:** In 2023, *U.S. News & World Report* ranked the Lewis Katz School of Medicine at Temple University number 68 in Research and among the Best Medical Schools.

**Areas of Specialization:** This interdisciplinary Biomedical Sciences graduate program offers five areas of concentration for students who plan to earn the PhD:

- Cancer Biology and Genetics
- Infectious Disease and Immunity
- Molecular and Cellular Biosciences
- Neuroscience
- Organ Systems and Translational Medicine

**Job Prospects:** This well-balanced program has been designed to be individually tailored to meet the interests and needs of each student and to fully prepare each student for a Biomedical Sciences career in academia, industry and government. The graduate program is designed to provide training in the theory and practice of Biomedical Sciences for eventual placement in research and teaching positions.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and approval from the Office of Graduate Studies at the Lewis Katz School of Medicine.

**Financing Opportunities:** All students are provided with a competitive stipend, health insurance and tuition remission. First-year students are supported by Medical School fellowships. After the first year, students receive financial support from extramural funds available to their research mentor, including training grants, research assistantships and fellowships. Students are expected to work full-time toward the completion of the degree requirements. A satisfactory level of performance must be maintained at all times.

Exceptionally qualified students who apply to the program may be nominated for Presidential and University Fellowships. In order to be considered for nomination, prospective students must submit all application materials by February 15.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 15

All applicants to the PhD program must apply via BioMedical's Centralized Application Service (BioMedCAS). The system can be accessed at <https://biomedcas2024.liaisoncas.com/applicant-ux/#/login>. Applicants should check their application status on the BioMedCAS portal often and inquire directly of BioMedCAS about receipt of materials.

A supplemental application is also required to be submitted directly to Temple University. Submission of the supplemental application generates the applicant's TUID number. The BioMedCAS application will not be considered without the assigned TUID.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from faculty and supervisors of research experiences.

**Coursework Required for Admission Consideration:** Applicants should have undergraduate training in the life sciences such as Biochemistry, Biology, Cell Biology, or Molecular Biology and Genetics. Students are also expected to have training in Chemistry and Mathematics.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in the Biological or Chemical Sciences is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's Biomedical Sciences graduate program, research interests and past experiences, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional. Students are not required to submit standardized scores, including GRE or MCAT scores, to supplement their application.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Advanced Standing:** Students who enter the PhD program in Biomedical Sciences may be considered for advanced standing, based on the successful completion of graduate-level courses in the Biological Sciences or Chemistry. The completed courses must be equivalent in content to coursework offered at Temple, and the grades earned must be a "B" or better in order to transfer credits. The Associate Dean reviews the syllabus from the completed course(s) to determine equivalency and makes the recommendation to accept the credits for Advanced Standing.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 37

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
BMSC 8101	Molecules to Cells	6
BMSC 8102	Experimental Design and Biostatistics	1
BMSC 8103	Scientific Integrity and Bioethics	1
BMSC 8104	Introduction to Laboratory Research I	1
BMSC 8201	Organ Systems: Function, Dysfunction and Therapeutics	4
BMSC 8202	Scientific Communications	1
BMSC 8203	Introduction to Bioinformatic Tools and Applications	1
BMSC 8204	Introduction to Laboratory Research II	1
BMSC 8401	Scientific Grant Writing	1
Student Seminar and Journal Club (1 per year) <sup>2</sup>		4
<b>Basic and Advanced Concentration-Specific Electives</b>		<b>10</b>
<b>Research Courses</b> <sup>3</sup>		
BMSC 9994	Preliminary Exam Preparation	
BMSC 9998	Postcandidacy Research	
BMSC 9999	Dissertation Writing	
<b>Total Credit Hours</b>		<b>37</b>

1

All students in the Biomedical Sciences program participate in a common first-year interdisciplinary experience that includes the core courses identified.

2

To complete this requirement, students select from BMSC 8500 Cancer Biology and Genetics Student Seminar and Journal Club, BMSC 8600 Infectious Disease and Immunity Student Seminar and Journal Club, BMSC 8700 Molecular and Cellular Biosciences Student Seminar and Journal Club, BMSC 8800 Neuroscience Student Seminar and Journal Club, or BMSC 8900 Organ Systems and Translational Medicine Student Seminar and Journal Club. Students register one time a year in the Spring term. Registration begins in their second year and then continuously throughout their matriculation. Students must complete a minimum of 3 credits before defending their dissertation. Students who fulfill the BMSC-PHD requirements prior to the Spring semester of their fifth year take an additional credit of BMSC 9999 in the term they defend their dissertation to fulfill the PhD credit requirement.

3

Students must take at least 6 credits of BMSC 9994, BMSC 9998, and/or BMSC 9999, with a minimum of 2 credits of BMSC 9999 taken after elevation to PhD candidacy to defend their dissertation. Students who have fulfilled the BMSC-PHD requirements prior to the Spring term of their fifth year take 7 credits of BMSC 9994, BMSC 9998, and/or BMSC 9999, with at least 3 credits of BMSC 9999 taken after elevation to PhD candidacy to defend their dissertation.

#### **Additional Requirements:**

##### *Laboratory Research:*

In the first year, students complete three laboratory rotations. In subsequent years, they participate in seminars and journal clubs in addition to performing research in the laboratory of their choice.

##### *Research Advisory Committee Meetings:*

Students are required to meet with their Research Advisory Committee each term to evaluate their progress toward the degree.

##### *Publications:*

Students must have sufficient data for at least one full-length, high-quality, first-author publication, excluding review articles, before receiving permission to write the dissertation. If a manuscript has not been accepted for publication at the time a student requests permission to write the dissertation, the student must present a submission-ready manuscript and evidence that the manuscript has been submitted for publication. The evidence is to include the name of the journal and acknowledgement of receipt of the manuscript from the journal.

##### *Outside Research Proposal:*

In the Spring term of the second year of study, students are required to prepare and defend an NIH-style grant proposal in their area of concentration on a topic that is distinct from the student's research. This is a requirement for elevation to candidacy.

#### **Culminating Events:**

##### *Dissertation Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should describe the context and background surrounding a particular research problem and a methodological plan for investigating the problem. The proposal is a requirement for admission to candidacy and should be submitted and approved during the Fall term of the third year in the program.

##### *Dissertation:*

The PhD in Biomedical Sciences is a research degree. Research training begins with three research rotations in the first year of the graduate program and continues with the selection of an area of concentration and a Dissertation Research Advisor, who is a member of the Graduate Faculty from within the selected area of concentration. The areas of concentration include Cancer Biology and Genetics, Infectious Disease and Immunity, Molecular and Cellular Biosciences, Neuroscience, and Organ Systems and Translational Medicine.

Under the direction of the Dissertation Research Advisor, the student develops an original research project. Dissertation research involves meaningful, critical thinking and the execution of ideas in the laboratory through the use of the scientific method. Dissertation research conducted by the student should be an original contribution to scientific knowledge. The quality of the student's PhD dissertation research should be equivalent to that found in reputable biomedical sciences journals.

Upon selection of an area of concentration and a Dissertation Research Advisor, a Research Advisory Committee is formed for each student. This Committee is responsible for the review of the student's research and academic progress twice yearly. It determines whether the content of the student's research is sufficient for the PhD dissertation.

The student submits the dissertation in complete form not less than 14 days prior to the date of the final examination. The dissertation must have been read and approved by the Dissertation Research Advisor prior to distribution. After the student has arranged the time, date and room for the dissertation defense, the "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," is completed and forwarded to the Graduate School on Main Campus and to the Office of Graduate Studies on the Health Sciences Center Campus at least 10 working days before the defense. Announcements of the defense are posted and emailed to all members of the cluster/area of concentration.

The Final Examination Committee evaluates the student's dissertation and demonstration of competence within the field of the dissertation and related areas. This Committee consists of five faculty members, including the Dissertation Research Advisor, Research Advisory Committee, and one additional faculty member from another cluster. The Committee evaluates the quality of the dissertation research and the student's ability to express, both in writing and orally, their research question, methodological approach, primary findings and implications. The Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation and private question/answer period.

## **Contacts**

### **Program Web Address:**

<https://medicine.temple.edu/education/biomedical-sciences-graduate-program>

### **Department Information:**

Biomedical Sciences Graduate Program  
Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB 1111  
Philadelphia, PA 19140  
tusmgrad@temple.edu  
215-707-2423  
215-707-6687

## Submission Address for Application Materials:

<https://biomedcas2024.liasoncas.com/applicant-ux/#/login>

## Submission Address for Supplemental Temple University Application:

[https://apply.temple.edu/MED\\_GRAD/](https://apply.temple.edu/MED_GRAD/)

## Department Contacts:

*Admissions and Program Coordinators:*

Dianne Soprano, PhD

Associate Dean for Graduate and MD/PhD Programs

[dsoprano@temple.edu](mailto:dsoprano@temple.edu)

215-707-3266

Scott K. Shore, PhD

Associate Dean for Graduate Studies and Specialty Programs

[sks@temple.edu](mailto:sks@temple.edu)

215-707-5072

## Medicine MD

LEWIS KATZ SCHOOL OF MEDICINE

## About the Program

Each year, the Lewis Katz School of Medicine at Temple University (LKSOM) welcomes a diverse class of students who have achieved academic excellence and demonstrated a commitment to serving others. Temple is renowned for its culture of service. We place particular emphasis on attracting future physicians who will provide care for underserved populations. Through their commitment to fulfilling the medical needs of our North Philadelphia neighbors and surrounding communities, our faculty pass on this tradition to our students.

LKSOM is dedicated to excellence in education, research and patient care, achieved by faculty, staff and learners who represent and serve our diverse society. The school provides:

- education that is patient-centered, instilling in learners the school's ethic of human service and lifelong learning;
- research that advances and integrates basic and clinical science; and
- patient care that is administered with compassion and understanding, utilizing contemporary knowledge and techniques.

LKSOM confers the Doctor of Medicine degree as well as offers the following dual degree programs: MD/PhD, MD/MA in Urban Bioethics, MD/MPH and MD/MBA.

The MD curriculum is a four-year program that is divided into two phases: pre-clerkship and clerkship. Our commitment is to train students to provide outstanding quality patient care and to conduct medical research with the utmost in professionalism.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Health Sciences Center of Temple University in Philadelphia, PA and St. Luke's University Health Network Regional Campus in Bethlehem, PA

**Full-Time/Part-Time Status:** The MD program must be completed on a full-time basis.

**Ranking:** In 2023, *U.S. News & World Report* ranked the Lewis Katz School of Medicine at Temple University number 68 in Research and among the Best Medical Schools.

**Job Prospects:** Graduates of the MD program typically continue their training in Accreditation Council for Graduate Medical Education (ACGME) accredited residencies and fellowships in all disciplines of medicine throughout the United States. Following residency, graduates enter careers in academic medicine, private practice, research and industry.

**Non-Matriculated Student Policy:** All students must be full-time matriculants.

**Financing Opportunities:** Financial support opportunities include scholarships, loans and federal work study.

## Admission Requirements and Deadlines

### Application Deadline:

*AMCAS® Application:* December 15

*Transcript submission to AMCAS®:* December 29

*Supplemental materials, including fee and letters:* January 15

Candidates apply through the American Medical College Application Service® (AMCAS®). The application deadline is December 15 of the year preceding matriculation. Temple considers applications from U.S. citizens or those with permanent resident or refugee/asylee status with the United States Citizenship and Immigration Services (USCIS).

When Temple has received a verified application from AMCAS®, candidates are sent an email with details for access to the online LKSOM supplemental application. Applications are considered complete when a supplemental application, supplemental fee and required letters of recommendation are received.

The supplemental application is used to help identify the applicant's unique interest in Lewis Katz School of Medicine at Temple University. A \$90 non-refundable application fee is collected online when you submit your LKSOM supplemental application. The supplemental application fee is waived for candidates who were approved for the Association of American Medical Colleges (AAMC) Fee Assistance Program (FAP) prior to submitting an AMCAS® application.

**Letters of Reference:** LKSOM considers letters of recommendation from a premedical committee, a packet from a school letter compilation service, or three individual letters:

- Premedical committee letters do not need a specific number of science/non-science letters.
- If submitting a compilation packet or individual letters, we prefer, but do not require, two letters from professors with whom you completed coursework from the AMCAS® course classification of Biology, Chemistry or Physics. One additional letter is required from a non-science professor regarding work experience or service activity.
- LKSOM welcomes letters from research experiences but prefers they be included in addition to the requested science letters from professors with whom you completed coursework.



LKSOM participates in the AMCAS® Letter Service. Letters can be sent to AMCAS® through the AMCAS® Letter Writer Application or Interfolio. All letters should be on letterhead and contain the letter writer's signature.

If LKSOM is designated as a recipient of the letter on the AMCAS® application, AMCAS® will release the electronic copy to LKSOM. All letters designated for LKSOM must be received for your application to undergo review.

At any point in the application process, applicants may submit additional letters to support their application and are encouraged to use the AMCAS® Letter Service to transmit those letters.

**Coursework Required for Admission Consideration:** Applicants should demonstrate preparation for the rigors of medical school and competency in the sciences achieved through a broad range of science coursework and the MCAT® exam. While there are no absolute course requirements, it is recommended that students complete coursework in Biochemistry, Biology, Chemistry (both general and organic), Physics, Psychology and Sociology. The Office of Admissions will only evaluate courses completed at a U.S. or Canadian college/university.

If recommended coursework in Biology, Chemistry or Physics is completed using AP credits, online, at a community college or through a study abroad program, we prefer to see classroom-based, upper-level science coursework in that discipline.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. Students who matriculate through the Temple University Accelerated Health Scholars program will earn their bachelor's degree after the first year of medical school.

LKSOM prefers a minimum of 90 semester hours from a U.S. or Canadian college/university. Coursework should be directed to the needs of premedical students. Courses designed for non-science majors or allied health students are not accepted.

Although the Admissions Committee holds no preference for science majors, all applicants, whether science majors or not, must demonstrate capacity for excellence in the sciences. In addition, students should have a broad humanities education and strong writing skills.

**Statement of Goals:** Applicants must submit a personal statement with their application.

**Standardized Test Scores:**

MCAT®: Required. Every applicant must take the Medical College Admission Test (MCAT®) of the Association of American Medical Colleges within three years of matriculation, and no later than September of the year in which the candidate applies. Applications are considered with the most recent MCAT® results, both sections and total. No minimum score is required for application.

Casper: All applicants to the MD program are required to complete an online assessment to assist with our selection process. Casper is an online, video-scenario test that assesses for non-cognitive skills and interpersonal characteristics that we believe are important for success in our program and complements the other tools that we use for applicant selection. Applicants can register for the U.S. Medicine test (CSP-10111) at <https://acuityinsights.app/>. Casper test results are valid for one admissions cycle.

## Program Requirements

### General Program Requirements:

#### Required Courses:

Code	Title	Credit Hours
<b>Year 1</b>		
MEDS M101	Fundamentals of Anatomy	0
MEDS M102	Fundamentals of Medicine 1	0
MEDS M103	Biological Systems I: Cardiovascular, Blood, Respiratory and Renal Systems	0
MEDS M104	Biological Systems II: Gastrointestinal, Endocrine, Bone and Reproductive Systems	0
MEDS M105	Biological Systems III: Nervous and Musculoskeletal Systems	0
MEDS M106	Biological Systems IV: Inflammation, Immune System and Skin	0
MEDS M107	Doctoring 1	0
<b>Year 2</b>		
MEDS M210	Diseases of Renal/Endo/Repro	0
MEDS M212	Microbiology/Inf. Dis.	0
MEDS M214	Diseases of Cardio/Resp	0
MEDS M217	Doctoring 2	0
MEDS M222	Diseases IV: GI/Hem-Onc/MS	0
MEDS M224	Diseases III: CNS	0
<b>Year 3</b>		
Third-Year Preparation		
FAMP M360	Family Medicine	0
INTM M301	Medicine	0
NEUR M370	Neurology	0
OBGY M320	Obstetrics/Gynecology	0
PEDI M330	Pediatrics	0
PSYM M340	Psychiatry	0
SURG M350	Surgery	0
Elective (1 block): Students must complete a 4-week elective block during their third year. Choose one 4-week elective or two 2-week electives. Electives are offered in several specialties, including surgical and medical subspecialties.		
<b>Year 4</b>		
EMMD M403	Emergency Medicine	0
Select one from the following:		
INTM M850	Medicine Subinternship	
PEDI M860	Pediatrics Subinternship	
SURG M870	Surgery Subinternship	
Select one from the following:		
INTM M530	Medical ICU (MICU) - Critical Care	
PEDI M685	Neonatal ICU (ICN) - Critical Care	
PEDI M690	Pediatric Pulmonary ICU/PICU	
SURG M769	Surgical ICU (SICU) - Critical Care	

Electives (6 blocks): Students must complete six 4-week elective blocks in their fourth year. Students may choose any elective offered, including clinical and non-clinical experiences. Electives give students the opportunity to learn more about the specific field and, in clinical rotations, to continue to participate in patient care and improve clinical skills. Non-clinical experiences include Advanced Anatomy and a Research or an Academic Medicine block.

Select one from the following:<sup>1</sup>

MEDS M908	Faculty Mentored Scholarly Experience 3a	
Seventh Elective Block		
MEDS M992	Doctoring 4/Capstone	0

1

Students may elect to do a year-long Scholarly Project in their fourth year. The project can be in clinical or basic science research, education, or school or community engagement. They have an advisor for the project and complete a Poster Presentation at the end of the year. If students do not choose to complete a Scholarly Project, they must complete a seventh elective block.

## Contacts

### Program Web Address:

<https://medicine.temple.edu/education/md-program>

### Department Information:

MD and MD/PhD Office of Admissions  
Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB 124  
Philadelphia, PA 19140  
medadmission@temple.edu  
215-707-3656  
Fax: 215-707-6932

### Submission Address for Application

#### Materials:

<https://students-residents.aamc.org/applying-medical-school-amcas/applying-medical-school-amcas>

## Physician Assistant MMS

LEWIS KATZ SCHOOL OF MEDICINE

### About the Program

The Master of Medical Science (MMS) program is designed to train outstanding Physician Assistants who enhance patient care in the North Philadelphia community and beyond. Graduates of the program are recognized as leaders, educators and innovators in the delivery of high-quality healthcare that is accessible, affordable, compassionate and respectful of cultural diversity.

The Physician Assistant program facilitates delivery of an innovative curriculum for medical students that meets the accreditation standards for inter-professional education set by the Liaison Committee on Medical Education (LCME). The program is designed to prepare students to provide patient-centered care in practice settings under the supervision of and in collaboration with physicians and inter-professional teams. The curriculum satisfies all of the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA) standards and

provides instruction in all areas tested by the National Commission on Certification of Physician Assistants (NCCPA) licensing examination. The goals of the program are to:

- support diversity and inclusion;
- promote cultural sensitivity in the provision of care to a diverse community;
- prepare highly trained physician assistants with a robust didactic and clinical curriculum that results in high-quality, compassionate, patient-centered care;
- encourage a high level of professionalism;
- cultivate collaborative patient care skills through integrated inter-professional education (IPE); and
- develop the skills needed to be effective lifelong learners.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** The curriculum is designed to be completed in approximately 26 months. Students begin in early June of the first year and complete their studies 26 months later at the end of the 12-week summer session, around July 30, to receive an August diploma.

**Interdisciplinary Study:** The Physician Assistant program is part of inter-professional education at the Lewis Katz School of Medicine. Inter-professional education is a collaborative exercise that involves students from the School of Medicine as well as from Temple University's College of Public Health, Maurice H. Kornberg School of Dentistry, School of Pharmacy, and School of Podiatric Medicine.

**Ranking:** In 2023, *U.S. News & World Report* ranked the Lewis Katz School of Medicine at Temple University number 68 in Research and among the Best Medical Schools.

**Job Prospects:** A critical need for Physician Assistants to work as part of a medical team providing access to quality healthcare has resulted from a looming critical shortage of physicians and an increase in the number of Americans covered through the Affordable Care Act (ACA) of 2010. Job prospects for graduates of the MMS program are excellent.

**Licensure/Certification:** The graduation competencies for the Physician Assistant MMS program are based on recommendations of the Physician Assistant Education Association (PAEA) and the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA), which is the accrediting body.

All students studying for the MMS degree at the Lewis Katz School of Medicine at Temple University receive a broad medical education that prepares them to take the Physician Assistant National Certifying Examination (PANCE). The PANCE is administered by the National Commission on Certification of Physician Assistants (NCCPA).

A passing score on the PANCE examination allows graduates to apply for licensure to practice medicine as a physician assistant in each U.S. state and territory. In addition, eight states require physician assistants to pass a jurisprudence examination demonstrating knowledge of state law prior to licensure: Louisiana, Maine, Nevada, Oklahoma, Oregon, South Carolina, Texas, and Wisconsin.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and

approval from the Office of Graduate Studies at the Lewis Katz School of Medicine.

**Financing Opportunities:** Limited financial support is available for MMS students.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer I:* January 15

All applicants to the MMS program must apply via the Centralized Application Service for Physician Assistants (CASPA). The system can be accessed at <https://caspa.liasoncas.com/>. All application materials must be submitted, completed and verified by CASPA no later than January 15. As this is a self-managed process, applicants are expected to monitor the status, including submission and receipt, of all application materials through the CASPA applicant portal. Because CASPA processing may take up to six weeks, it is strongly recommended that all application materials be received by CASPA by December 1.

A supplemental application is also required to be submitted directly to Temple University. Submission of the supplemental application generates the applicant's TUID number. The CASPA application will not be considered without the assigned TUID.

Applications are processed throughout the year as they are received. Thus, it is in the applicant's best interest to apply early to this highly competitive degree program. Deadline extensions for incomplete applications are not available.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation are to be submitted electronically at <https://caspa.liasoncas.com/>. They should include one letter each from:

- a professor with whom the applicant has completed science coursework;
- a physician, physician assistant (preferred, but not required), or nurse practitioner; and
- an individual of the applicant's choosing, but one who possesses a personal supervisory knowledge of the applicant.

**Coursework Required for Admission Consideration:** Prerequisite coursework includes:

- Biochemistry (3 credits)
- General Biology I and II, with lab (8 credits)
- General Chemistry I and II, with lab (8 credits)
- Human Anatomy\* (4 credits)
- Human Physiology\* (3 credits)
- Medical Terminology (2 credits)
- Organic Chemistry, with lab (4 credits)
- Psychology (3 credits)
- Statistics (2 credits)
- Two or more of the following: Cell Biology, Genetics, Immunology, Microbiology, Molecular Biology (6 credits)

\* Combined Human Anatomy/Physiology may substitute with a total of 8 required credits.

All science and math prerequisite coursework must be completed within 10 years prior to June enrollment. All prerequisite coursework must be completed prior to enrollment with a grade of at least a "C" or 2.0 on a 4.0 scale.

To identify coursework that fulfills the program's prerequisite requirements, applicants are required to complete the "Program Materials: Prerequisites" section of the CASPA application.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from a regionally accredited college or university in the United States or Canada is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's Physician Assistant graduate program, research interests and past experiences, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE or MCAT: Optional. If submitting scores, the test must have been taken within three years of matriculation. Applicants with GRE scores must contact ETS to request release of GRE scores through CASPA. The relevant code for the Physician Assistant program is 1746. MCAT scores are automatically transmitted to CASPA when the applicant's AMCAS® ID number is provided.

**Resume:** Current resume or CV required.

**Interview:** Candidates must have strong interpersonal skills, including the ability to listen and be culturally sensitive to another's point of view. The PA Program Admissions Committee gives strong consideration to students who:

- have demonstrated exceptional service to others (e.g., military/police/fire service, Peace Corps, Teach for America);
- are educationally/environmentally disadvantaged; or
- hail from groups underrepresented in medicine.

Applicants are notified of their selection for interview by email. In addition to two personal interviews, the interview day includes a Clinical Skills Center Activity (MMI) and a brief essay at the time of interview.

**Citizenship:** Due to limitations on U.S. government-subsidized financing for medical education, Temple University only considers applications from U.S. citizens or non-citizens who have permanent resident or refugee/asylee status with the U.S. Immigration and Naturalization Service (INS). Applicants with permanent resident or refugee/asylee status need to provide a copy of official INS documentation when completing the CASPA application.

**Healthcare/Patient Contact Experience:** To be considered for an interview, 400 hours of clearly documented volunteer or paid direct hands-on patient contact experience or witnessing care firsthand are required. These hours are strongly recommended to include a minimum of 100 hours working with or shadowing an MD, DO, and/or Physician Assistant and 200 hours of relevant healthcare experience.

**Community/Volunteer Service:** Applicants are recommended to have a minimum 50 hours of community service activities, not including those performed in high school. All types of community service and volunteer activities are considered.

**Clearances:** Upon acceptance, students must complete a Child Abuse History Clearance and a Criminal Background Check. Any academic infraction, license infraction, felony or misdemeanor after the date of the original CASPA application submission must be reported to the MMS program within 10 business days of the occurrence.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 117, divided into a preclinical curriculum of 69 credits over 14 months and a clinical curriculum of 48 credits over 12 months

### Required Courses:

Year 1		
<b>Summer I</b>		<b>Credit Hours</b>
PA 8101	Physician Assistant Practice I	1
PA 8102	Patient Assessment I	1
PA 8103	Human Gross Anatomy	5
PA 8104	Introduction to Scientific Inquiry	1
PA 8105	Foundations of Medical Sciences I	4
PA 8106	Introduction to Epidemiology and Biostatistics	2
<b>Credit Hours</b>		<b>14</b>
<b>Fall</b>		
PA 8201	Physician Assistant Practice II	1
PA 8202	Patient Assessment II	1
PA 8203	Foundations of Medical Sciences II	4
PA 8204	Fundamentals of Hematology	3
PA 8205	Fundamentals of Cardiology	4
PA 8206	Fundamentals of Pulmonology	4
PA 8305	Fundamentals of Ears/Eyes/Nose/Throat (EENT)	2
PA 8308	Fundamentals of Dermatology	2
<b>Credit Hours</b>		<b>21</b>
<b>Spring</b>		
PA 8207	Fundamentals of Gastroenterology	3
PA 8301	Physician Assistant Practice III	1
PA 8302	Patient Assessment III	1
PA 8303	Fundamentals of Nephrology	2
PA 8304	Fundamentals of Endocrinology	3
PA 8306	Fundamentals of Neurology	2
PA 8307	Fundamentals of Rheumatology and Orthopedics	3
PA 8309	Essentials of Psychiatry	2
PA 8403	Bioethics	2
<b>Credit Hours</b>		<b>19</b>
<b>Year 2</b>		
<b>Summer</b>		
PA 8401	Physician Assistant Practice IV	1
PA 8402	Patient Assessment IV	1
PA 8404	Essentials of Reproductive Health	4
PA 8405	Essentials Across the Lifespan	4
PA 8406	Essentials of Surgery and Emergency Medicine	4

PA 9991	Scholarly Clinical Research I	1
<b>Credit Hours</b>		<b>15</b>
<b>Total Credit Hours</b>		<b>69</b>

Code	Title	Credit Hours
<b>Year 2 Fall and Spring / Year 3 Summer <sup>1</sup></b>		
	Behavioral Medicine Clerkship	5
	Emergency Medicine Clerkship	5
	Family Medicine Clerkship	5
	General Surgery Clerkship	5
	Internal Medicine Clerkship	5
	Obstetrics/Gynecology Clerkship	5
	Pediatrics Clerkship	5
	Elective I Clerkship	5
	Elective II Clerkship	5
	Scholarly Clinical Research II	1
	Comprehensive Review	2
<b>Total Credit Hours</b>		<b>48</b>

Code	Title	Credit Hours
<b>Total Credit Hours of Preclinical Coursework:</b>		<b>69</b>
<b>Total Credit Hours of Clinical Clerkship, Research, and Review:</b>		<b>48</b>
<b>Total Credit Hours</b>		<b>117</b>

1

Students spend the last 12 months of the program rotating through clerkships in seven assigned medical disciplines and two elective rotations at Temple University Hospital System locations. Students are under the direct supervision of a physician or physician assistant, although they interact with numerous other healthcare providers, including residents, interns, medical students, nurses, and others. Students are expected to work the preceptor's work schedule, which may include nights/weekends.

### Culminating Event:

#### Technical Standards:

The technical standards for the Lewis Katz School of Medicine at Temple University Physician Assistant Program have been established to ensure that students have the ability to demonstrate academic mastery and competence when performing clinical skills and the ability to communicate clinical information. These technical standards are intended to ensure that each student has the academic and physical ability to acquire competencies, as defined by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), the American Academy of Physician Assistants (AAPA), the National Commission on Certification of Physician Assistants (NCCPA), and the Physician Assistant Education Association (PAEA). The technical standards are consistent with the technical standards set forth by the Accreditation Council for Graduate Medical Education (ACGME).

The candidate for successful completion of the Physician Assistant Program must be able to perform the following skills:

1. Observation: Observe demonstrations and experiments in the basic sciences, including but not limited to physiologic and pharmacologic demonstrations, microbiologic cultures, and microscopic studies of microorganisms and tissues in normal and pathologic states; observe

a patient accurately at a distance and close at hand, necessitating the functional use of vision, which is enhanced by the functional use of the sense of smell.

2. **Communication:** Speak to, hear and observe patients in order to elicit both verbal and nonverbal information; communicate effectively and sensitively with and about patients; communicate effectively and efficiently in oral and written form with the patient, the patient's family, and all members of the healthcare team, including referral sources such as agencies and other physicians. Speech, reading and writing are essential.
3. **Motor:** Exhibit sufficient motor function to carry out basic laboratory techniques and to elicit information from patients by palpation, auscultation, percussion and other diagnostic maneuvers; perform anatomical dissections and use a microscope; perform basic laboratory tests (e.g., urinalysis, gram stain, preparation of a blood smear), diagnostic procedures (e.g., proctoscopy, paracentesis); perform/read EKGs and read X-rays; execute motor movements reasonably required to provide general care and emergency treatment to patients (e.g., cardiopulmonary resuscitation, administration of intravenous medication, application of pressure to stop bleeding, opening obstructed airways, suturing simple wounds, and performing simple, general gynecologic procedures). Coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision are essential.
4. **Intellectual, i.e., Conceptual, Integrative, and Quantitative Abilities:** Possess abilities to measure, calculate, reason, analyze and synthesize, which are required when engaging in problem solving, the critical skill demanded of physician assistants; comprehend three-dimensional relationships and understand the spatial relationships of structures.
5. **Behavioral and Social Attributes:** Possess the physical and emotional health required for full utilization of intellectual abilities, exercise of good judgment, prompt completion of all responsibilities attendant to the diagnosis and care of patients, and development of mature, sensitive and effective relationships with patients; adapt to changing environments, display flexibility, and learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities assessed during the admission and education process.

The faculty of Temple University's Physician Assistant Program recognizes its responsibility to present candidates for the Physician Assistant degree who have the knowledge, attitudes and skills to function in a broad variety of clinical situations and to render a broad spectrum of patient care.

## Contacts

### Program Web Address:

<https://medicine.temple.edu/education/physician-assistant-program/about-program>

### Department Information:

Physician Assistant Program Office of Admissions  
Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB 124  
Philadelphia, PA 19140  
pa-admissions@temple.edu  
215-707-3656

Fax: 215-707-6932

## Submission Address for Application Materials:

<https://caspa.liaisoncas.com/>

## Submission Address for Supplemental Temple University Application:

[https://apply.temple.edu/MED\\_GRAD/](https://apply.temple.edu/MED_GRAD/)

## Department Contacts:

### Admissions:

Christine Connolly, AS  
Program Administrator  
christine.connolly@temple.edu  
215-707-8207

### Program Director:

Christine F. Mount, MS, PA-C  
Associate Professor, Clinical Surgery  
christine.mount@temple.edu  
215-707-4849

## Urban Bioethics MA

LEWIS KATZ SCHOOL OF MEDICINE

## About the Program

The Master of Arts in Urban Bioethics (MAUB) is the nation's only bioethics degree explicitly centered on health equity. The program provides a solid foundation in traditional bioethics along with practical training and resources for understanding and analyzing the ethics, values and value conflicts that exist in urban settings.

Students who pursue the MAUB gain practical, theoretical and methodological skills to address extreme inequities of health and access to medical, legal and other resources in disparate, diverse and dense urban areas. Due to the far-reaching impact of bioethics, students are welcomed from a wide variety of educational and professional backgrounds, including medicine, policy, philosophy and law.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The degree is designed for graduate students and professionals who face, or will soon face, the complexities and disparities of urban health, and want specialized training in the ethics, values and politics of healthcare in our increasingly multidimensionally diverse society. Dual-degree students can take advantage of the inherent interdisciplinary nature of a dual degree by applying approved electives from their primary program toward the MA, while stand-alone MA students take 15 credits of applicable electives to round out their degree. Six dual-degree programs are currently offered:

- MD/MA in Urban Bioethics within the Lewis Katz School of Medicine at Temple University

- DPT in Physical Therapy/MA in Urban Bioethics with the Temple University College of Public Health
- MA in Philosophy/MA in Urban Bioethics with the Temple University College of Liberal Arts
- PhD in Philosophy/MA in Urban Bioethics with the Temple University College of Liberal Arts
- MA in Sociology/MA in Urban Bioethics with the Temple University College of Liberal Arts
- PhD in Sociology/MA in Urban Bioethics with the Temple University College of Liberal Arts

**Ranking:** In 2023, *U.S. News & World Report* ranked the Lewis Katz School of Medicine at Temple University number 68 in Research and among the Best Medical Schools.

**Job Prospects:** Students graduating with the MA in Urban Bioethics have the practical skills, including qualitative research, writing for diverse audiences, and advocacy, as well as theoretical and methodological training to advance in their existing careers and compete more competitively for residencies, job placements or other advanced graduate training programs.

**Non-Matriculated Student Policy:** Non-matriculated students with at least a bachelor's degree may register for courses by contacting MAUB@temple.edu. Credit toward a subsequent degree program at Temple University is limited to 9 credits, unless the student enrolls in the Urban Bioethics graduate certificate program. All 14 credits required to complete the certificate are applicable to the Urban Bioethics MA.

**Financing Opportunities:** Limited support is available for MA students concurrently enrolled in the MD program at Temple University.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1  
*Summer:* April 1

Late applications may be considered for admission, even as late as up to two weeks prior to the term's start date.

Dual-degree applicants should note that application deadlines for companion programs may be earlier than the deadlines for the MA in Urban Bioethics. Please visit the companion program's description in the Graduate Bulletin for details.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2-3

Students applying to the Urban Bioethics MA program must submit three letters of reference and original transcripts from all post-high school institutions attended. However, students already matriculated into a graduate program at Temple University who are applying for a dual degree may:

- upon permission of their recommenders and their home school, use their home school letters of recommendation for the Urban Bioethics MA application; and

- ask the Urban Bioethics program administrators to request a transcript from the home school.

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with your academic performance and/or from professional supervisors familiar with your professional experience, accomplishments and potential for success in a graduate program.

**Bachelor's Degree in Discipline/Related Discipline:** While a baccalaureate degree is required for admission to the MA program, the major studied for the undergraduate degree is not specified.

**Statement of Goals:** Two to three double-spaced pages should address how you see the MA in Urban Bioethics as integral to your current educational goals and current/future career development.

### Standardized Test Scores:

GRE: Optional for applicants graduating from traditional undergraduate programs. Applicants for the dual degree and those already holding an advanced degree are not required to submit GRE scores.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 32

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
UBTH 5001	Urban Bioethics 1 (Professional Students)	3
UBTH 5002	Urban Bioethics 2 (Professional Students)	3
UBTH 5022	Community Engagement I (Professional Students)	2
UBTH 5023	Community Engagement II (Professional Students)	2
UBTH 5031	The Values, Ethics, & Economics of Health Care Delivery in Urban Communities (Professional Students)	2
UBTH 5041	Critical Social Science and Urban Bioethics (Professional Students)	2
<b>Electives</b>		<b>15</b>
<b>Research Course</b>		
UBTH 9996	MA in Urban Bioethics Thesis (Graduate Students)	3
<b>Total Credit Hours</b>		<b>32</b>

### Culminating Event:

*Thesis:*

The thesis should make a novel contribution to the field. Toward this end, the student conducts an original research project, empirical or non-

empirical, and produces a publishable paper. The research is undertaken with guidance from an approved thesis advisor from the Lewis Katz School of Medicine, the Center for Urban Bioethics, or a dual-degree student's home department.

## Contacts

### Program Web Address:

<https://medicine.temple.edu/departments-centers/research-centers/center-bioethics-urban-health-and-policy/educational-programs>

### Department Information:

Center for Urban Bioethics  
Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB Suite 324  
Philadelphia, PA 19140  
MAUB@temple.edu  
215-707-3664

### Submission Address for Application Materials:

[https://apply.temple.edu/MED\\_GRAD/](https://apply.temple.edu/MED_GRAD/)

### Mailing Address for Transcripts/Application Materials:

LKSOM Center for Urban Bioethics  
ATTN: Catherine Averill  
3500 N. Broad Street, MERB Suite 324F  
Philadelphia, PA 19140  
MAUB@temple.edu

### Department Contacts:

#### Director of Education:

Nora Jones, PhD  
nora.jones@temple.edu  
215-707-7178

#### Assistant Director:

Providenza Loera Rocco, JD, MSW, MBE  
providenza.rocco@temple.edu  
215-707-9963

#### Senior Advisor:

Catherine Averill, MA, MFA, PSM  
catherine.averill@temple.edu

## Graduate Certificate: Narrative Medicine

LEWIS KATZ SCHOOL OF MEDICINE

### About the Certificate

The graduate certificate in Narrative Medicine is designed to enhance medical and healthcare education by giving students the competence to identify, acknowledge and interpret stories of sickness and of health through close observation of the human experience as they represent and serve our diverse society. Strong focus is placed on analysis of fiction and non-fiction writing. Reflective and creative writing assignments are designed to improve students' ability to recognize, interpret and tell

patient stories. Students interested in film, visual arts, dance and other creative mediums have opportunities to explore these outlets.

Using small-seminar courses and a capstone project, students explore the role of narrative in medicine and the vast expanse of human stories to improve their ability to care for patients and to deepen their satisfaction as a healthcare provider. The certificate is unique in its provision of a theoretical and academic foundation in narrative medicine bolstered immediately and rigorously by experiential work in the hospital setting.

The certificate program is open to students at the Lewis Katz School of Medicine (LKSOM) who are working toward their MD degree. They may complete the Narrative Medicine certificate along with their LKSOM MD curriculum. Courses and assignments have been formulated to align with and complement medical school coursework.

The certificate program is also open to students who are not pursuing the MD. They may take advantage of the vast knowledge and experience of our medical school and humanities faculties and teaching physicians at Temple University Hospital.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate's director for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are reviewed year-round for the graduate certificate program.

Students in the MD program apply to the Narrative Medicine certificate program before or during their first year of study in order to coordinate their schedule and complete the certificate by the time they finish the MD degree.

*APPLY ONLINE to this certificate program.*

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University. Official undergraduate and graduate transcripts from all accredited institutions attended are required.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

### LKSOM MD Student Curriculum

Code	Title	Credit Hours
<b>Core Courses</b>		
NMED 8101	Introduction to Narrative Medicine (Professional Students)	3

NMED 8102	Literature and Medicine (Professional Students)	2
NMED 8103	Narrative Medicine and Clinical Practice (Professional Students)	2

**Electives**

Select two from the following: <sup>1</sup> 2

MEDS M130	Reflections on Gross Anatomy	
MEDS M143	Medical Humanities	
MEDS M226	Arts Workshop	
MEDS M227	Fundamentals of Improv Theater	
MEDS M234	Yoga and Writing	
MEDS M240	An Exploration of Narrative Medicine	
MEDS M241	An Exploration of Meaning through Stories, Poems, and Plays	
MEDS M243	Humans of North Philly: Portraits from the Streets	
MEDS M270	Artful Thinking	
PSYM M266	Psychiatry: A Narrative Pursuit	

**Capstone Course**

NMED 9182	Narrative Medicine Capstone Project (Professional Students)	3
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**Total Credit Hours** 12

1

For a list of specific courses offered each academic term, students should contact the LKSOM Dean of Students.

## Curriculum for Students Not Enrolled in LKSOM's MD Program

Code	Title	Credit Hours
NMED 8200	Special Topic in Narrative Medicine (Graduate Students) (2 terms)	2
NMED 8201	Introduction to Narrative Medicine (Graduate Students)	3
NMED 8202	Literature and Medicine (Graduate Students)	2
NMED 8204	Narrative Medicine and Clinical Practice (Graduate Students)	2
NMED 9282	Narrative Medicine Capstone Project (Graduate Students)	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://medicine.temple.edu/education/narrative-medicine-program>

### Admissions Information:

Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB 325  
Philadelphia, PA 19140  
215-707-7131

## Submission Address for Application Materials:

[https://apply.temple.edu/MED\\_GRAD/](https://apply.temple.edu/MED_GRAD/)

## Department Contacts:

*Director, Certificate in Narrative Medicine:*

Naomi Rosenberg, MD

Assistant Director of Narrative Medicine

[naomi.rosenberg@tuhs.temple.edu](mailto:naomi.rosenberg@tuhs.temple.edu)

215-707-1670

## Graduate Certificate: Urban Bioethics

LEWIS KATZ SCHOOL OF MEDICINE

### About the Certificate

The Urban Bioethics graduate certificate program is designed for individuals confronting, or who anticipate confronting, health inequities in their work and are seeking specialized training in understanding and analyzing the ethics, values and value conflicts relevant to the urban setting. Students in the certificate program gain practical skills, theoretical orientations and resources to deliver better care. They are prepared to be innovators in research, care delivery, and policy and advocacy work.

The Urban Bioethics certificate program is a viable option for those who seek additional bioethics training but are unable to fully commit to the master's program or who wish to explore the field before applying to the MA program. Students who earn the graduate certificate have one year after being awarded the certificate to apply for the MA program and, if accepted, all certificate credits can be applied to the master's degree.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate's senior advisor for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program. Credit toward a subsequent degree program at Temple University is limited to 9 credits. However, if the student completes the Urban Bioethics graduate certificate program, all 14 credits required to earn the certificate are applied to the MA in Urban Bioethics.

## Admission Requirements and Deadlines

### Application Deadline:

Applications are reviewed year-round for the graduate certificate program.

*APPLY ONLINE to this certificate program.*

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University. Official undergraduate and graduate transcripts from all accredited institutions attended are required.



**Resume:** Current resume required.

215-707-9963

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 14

*Senior Advisor:*

Catherine Averill, MA, MFA, PSM  
catherine.averill@temple.edu

*Required Courses:*

Code	Title	Credit Hours
UBTH 5101	Urban Bioethics 1 (Graduate Students)	3
UBTH 5102	Urban Bioethics 2 (Graduate Students)	3
UBTH 5122	Community Engagement I (Graduate Students)	2
UBTH 5123	Community Engagement II (Graduate Students)	2
UBTH 5131	The Values, Ethics, & Economics of Health Care Delivery in Urban Communities (Graduate Students)	2
UBTH 5141	Critical Social Science and Urban Bioethics (Graduate Students)	2
<b>Total Credit Hours</b>		<b>14</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://medicine.temple.edu/departments-centers/research-centers/center-urban-bioethics/educational-programs/certificate-non-matriculated-students>

### Admissions Information:

Center for Urban Bioethics  
Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB Suite 324F  
Philadelphia, PA 19140  
MAUB@temple.edu  
215-707-7178

### Submission Address for Application

#### Materials:

[https://apply.temple.edu/MED\\_GRAD/](https://apply.temple.edu/MED_GRAD/)

### Mailing Address for Transcripts/Application

#### Materials:

LKSOM Center for Urban Bioethics  
ATTN: Catherine Averill  
3500 N. Broad Street, MERB Suite 324F  
Philadelphia, PA 19140  
MAUB@temple.edu

### Department Contacts:

*Director of Education:*

Nora Jones, PhD  
nora.jones@temple.edu  
215-707-7178

*Assistant Director:*

Providenza Loera Rocco, JD, MSW, MBE  
providenza.rocco@temple.edu

## Center for the Performing and Cinematic Arts / Boyer College of Music and Dance

Since its founding as a college of music in 1962, the Boyer College of Music and Dance has grown in size and scope to become a comprehensive college representing academic and artistic excellence in music and dance. Originating as a single department of music education offering vocal instruction at Temple University in 1893, the College is now part of the Center for the Performing and Cinematic Arts at Temple University. Boyer College is located in close proximity to Philadelphia's historic cultural institutions, including the Kimmel Cultural Campus, Opera Philadelphia, PHILADANCO!, Philadelphia Ballet, Philadelphia Museum of Art, and The Philadelphia Orchestra.

The Boyer College of Music and Dance is committed to nurturing talented students by promoting music and dance as art forms, as media for human expression, and as subjects of intellectual inquiry. Recognizing that all of the arts possess unique powers—to move the spirit, to excite the mind, to reveal the past, to celebrate the future, to instruct, to heal, to foster communication—the College aims to advance music and dance in their myriad, interrelated forms through creative and scholarly work, teaching and service. Boyer College seeks to provide an inclusive educational community that honors the uniqueness of the individual, values diversity of perspective, and affirms music and dance as central to society and culture.

Students at Boyer College have the unique opportunity to interact with leading composers, conductors, educators, performers and choreographers while experiencing a challenging and diverse academic curriculum. Graduates have gone on to rewarding careers as music and dance professionals. Many are in leadership positions and teaching at top colleges and universities throughout the country.

Among the many accomplishments of the Boyer College of Music and Dance are:

- Numerous Grammy nominations and awards.
- Selection of Dance MFA student choreography for the American College Dance Association's biennial National College Dance Festival at the John F. Kennedy Center for the Performing Arts.
- Faculty honors that include Fulbright Scholarships; Guggenheim, National Endowment for the Arts, and Pew Fellowships; and National Dance Education Organization awards.

### Graduate Programs and Certificates

- Choral Conducting MM (p. 475)
- Collaborative Piano and Chamber Music MM (p. 478)
- Collaborative Piano and Opera Coaching MM (p. 481)
- Dance MA (p. 484)
- Dance MFA (p. 486)
- Dance PhD (p. 488)
- Instrumental Conducting: Wind-Band Emphasis MM (p. 491)
- Jazz Studies MM (p. 494)
- Music MA (p. 497)
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- Music PhD (p. 501)
- Music Composition MM (p. 506)
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- Music History MM (p. 516)
- Music Performance/Bassoon MM (p. 519)
- Music Performance/Cello MM (p. 522)
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- Music Performance/Tuba MM (p. 572)
- Music Performance/Viola MM (p. 575)
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- Music Performance/Voice MM (p. 582)
- Music Performance/Bassoon DMA (p. 585)
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- Graduate Certificate: Music Teaching (p. 701)
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## Graduate Faculty

*Charles Abramovic*, Professor, Department of Keyboard Studies, Boyer College of Music and Dance; DMA, Temple University.

*Mitos Andaya Hart*, Associate Professor, Department of Vocal Arts, Boyer College of Music and Dance; DMA, University of Kansas.

*Christine L. Anderson*, Associate Professor, Department of Vocal Arts, Boyer College of Music and Dance; DMA, University of Cincinnati College-Conservatory of Music.

*Beth Bolton*, Associate Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, Temple University.

*Karen E. Bond*, Associate Professor, Department of Dance, Boyer College of Music and Dance; PhD, La Trobe University.

*Darlene M. Brooks*, Associate Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, Temple University.

*Sara Buechner*, Professor, Department of Keyboard Studies, Boyer College of Music and Dance; DMA, Manhattan School of Music.

*Nathan Buonviri*, Associate Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, Temple University.

*David B. Cannata*, Associate Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, New York University.

*Dustin Cates*, Assistant Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, University of Missouri-Kansas City Conservatory of Music and Dance.

*Deborah A. Confredo*, Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, Florida State University.

*Patricia Cornett*, Assistant Professor, Department of Instrumental Studies, Boyer College of Music and Dance; DMA, University of Michigan.

*Marcus DeLoach*, Associate Professor, Department of Vocal Arts, Boyer College of Music and Dance; DMA, Rice University.

*Rollo A. Dilworth*, Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; DMA, Northwestern University.

*Sherril Dodds*, Professor, Department of Dance, Boyer College of Music and Dance; PhD, University of Surrey.

*Stephanie Doktor*, Assistant Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, University of Virginia.

*Edward Flanagan*, Associate Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, Temple University.

*Rachelle Fleming*, Associate Professor, Department of Vocal Arts, Boyer College of Music and Dance; DMA, University of Miami.

*Mark Franko*, Laura H. Carnell Professor, Department of Dance, Boyer College of Music and Dance; PhD, Columbia University.

*Shana Goldin-Perschbacher*, Associate Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, University of Virginia.

*Matthew J. Greenbaum*, Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, City University of New York.

*Suzanne Hall*, Associate Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, University of Memphis.

*Jillian Harris*, Associate Professor, Department of Dance, Boyer College of Music and Dance; MFA, New York University Tisch School of the Arts.

*yaTande Whitney V. Hunter*, Assistant Professor, Department of Dance, Boyer College of Music and Dance; PhD, Institute for Doctoral Studies in the Visual Arts.

*Laura E. Katz Rizzo*, Associate Professor, Department of Dance, Boyer College of Music and Dance; PhD, Temple University.

*Michael Klein*, Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, State University of New York at Buffalo.

*Edward D. Latham*, Associate Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, Yale University.

*Kathryn Leemhuis*, Assistant Professor, Department of Vocal Arts, Boyer College of Music and Dance; DMA, University of Cincinnati College-Conservatory of Music.

*Joyce Z. Lindorff*, Professor, Department of Keyboard Studies, Boyer College of Music and Dance; DMA, The Juilliard School.

*Wendy Magee*, Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, University of Sheffield.

*Noriko Manabe*, Associate Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, Graduate Center, City University of New York.

*Phillip R. O'Banion*, Associate Professor, Department of Instrumental Studies, Boyer College of Music and Dance; MM, University of Colorado.

*Richard D. Oatts*, Professor, Department of Music Studies, Boyer College of Music and Dance.

*Lambert T. Orkis*, Professor, Department of Keyboard Studies, Boyer College of Music and Dance; MM, Temple University.

*Elizabeth C. Parker*, Associate Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, University of Nebraska-Lincoln.

*Paul Rardin*, Elaine Brown Chair in Choral Music and Associate Professor, Department of Vocal Arts, Boyer College of Music and Dance; DMA, University of Michigan.

*Alison M. Reynolds*, Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, Temple University.

*Eduard Schmieder*, Laura H. Carnell Professor, Department of Instrumental Studies, Boyer College of Music and Dance; DMA equiv., Gneissen Russian Academy of Music.

*Helen Shoemark*, Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, University of Melbourne.

*Jeffrey G. Solow*, Professor, Department of Instrumental Studies, Boyer College of Music and Dance; BA, University of California Los Angeles.

*Merián Soto*, Professor, Department of Dance, Boyer College of Music and Dance; MA, Columbia University.

*Terrell L. Stafford*, Laura H. Carnell Professor, Department of Music Studies, Boyer College of Music and Dance; MM, Rutgers University.

*Robert T. Stroker*, Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, Michigan State University.

*Adam Vidiksis*, Assistant Professor, Department of Music Studies, Boyer College of Music and Dance; DMA, Temple University.

*Maurice W. Wright*, Laura H. Carnell Professor, Department of Music Studies, Boyer College of Music and Dance; DMA, Columbia University.

*Xiang Xu*, Assistant Professor, Department of Dance, Boyer College of Music and Dance; MFA, New York University Tisch School of the Arts.

*Michael L. Zanders*, Assistant Professor, Department of Music Education and Music Therapy, Boyer College of Music and Dance; PhD, Temple University.

*Steven D. Zohn*, Laura H. Carnell Professor, Department of Music Studies, Boyer College of Music and Dance; PhD, Cornell University.

## Choral Conducting MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Choral Conducting.

### About the Program

The Department of Vocal Arts offers a program of study leading to the Master of Music in Choral Conducting. Graduate majors in the department have the opportunity to conduct a number of resident ensembles, as well as present their own recitals with the Graduate Conductors Chorus.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With the approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The degree is intended to prepare students for successful careers in choral music by providing the highest level of

training in the many skills required for the choral conductor, including technical, theoretical, analytical, historical, linguistic, keyboard and vocal skills. The department prepares students to become teachers and conductors striving toward the highest possible artistic excellence.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission of the department chair and the Associate Dean.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 1

Applications are processed as they arrive up to the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 32*

*Required Courses:*

Code	Title	Credit Hours
MUSC 8207	Vocal Pedagogy for the Choral Conductor	2
MUSC 8300	Concert Choir (2 terms)	2
MUSC 8351	Choral Conducting Seminar I	2
MUSC 8352	Choral Conducting Seminar II	2
MUSC 8353	Choral Conducting Seminar III	2
MUSC 8354	Choral Conducting Seminar IV	2
MUSC 8359	Choral Literature: 1910 to the Present	2
MUSC 8361	Choral Literature 1450-1610	2
MUSC 8362	Choral Literature 1610-1910	2
MUSC 8364	Choral Literature in the Global Community	2
MUSC 8384	Private Lesson: Choral Conducting Major (2 terms)	2
MUST 8701	Research in Music	3
MUST 8742	Seminar in Theoretical Analysis	3
	or MUST 8746 Seminar in Stylistic Analysis	
Electives <sup>1</sup>		4
<b>Total Credit Hours</b>		<b>32</b>

<sup>1</sup>

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition,

Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

*Proficiencies in Voice, Piano, and Musicianship:*

Proficiencies are evaluated by the department in the first term of graduate study.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of academic terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Graduate students in non-performing curricula may take up to six credits of applied study toward the degree with the permission of the major advisor. Such non-required lessons may be taken only if the student can pass the normal graduate-level performing audition expected of

performance majors. In this event, a fee of \$200, not covered by tuition remission, is charged.

Alternately, a graduate student, regardless of major, with a demonstrable performing proficiency that may not meet the more rigorous requirements of a graduate-level performing audition, may, by audition, qualify to take two credits of applied study per term for graduate credit. These courses carry a fee of \$400 plus tuition and may be applied to the non-performing curriculum for degree credit up to six credits with the approval of the major advisor. Tuition remission may not be used to cover the private lesson fee.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:***Comprehensive Examination:*

All candidates for the Master of Music degree are required to take a comprehensive examination in the major area that is designed and given by the department in the final term of coursework. With this final comprehensive spoken examination, each student spends one hour with the entire choral faculty answering questions that are mostly from the major field but also often include other areas of music, art, history, theory, etc. Often, but not always, examples are played at the piano for historic placement and identification. The students prepare for the exam mostly through a thorough review of eight notebooks, four each from Choral Literature and Choral Conducting Seminar. The exam is scheduled by the department and graded by all of the department's graduate faculty.

*Public Recitals:*

Choral Conductors present two recitals in the second year of study, utilizing the Recital Chorus and the Graduate Conductors Chorus. One public recital is required in the Fall term (MUSC 8353) and one in the Spring term (MUSC 8354).

Graduation recitals are typically one hour in length, presented on campus in either Rock Hall or Klein Recital Hall, and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/choral-conducting-mm-bc-chco-mmus>

**Department Information:**

Dept. of Vocal Arts  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
choirs@temple.edu  
215-204-8304

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Dr. Christine Anderson  
christine.anderson@temple.edu  
215-204-8375

### Chairperson:

Dr. Paul Rardin  
rardin@temple.edu  
215-204-4742

## Collaborative Piano and Chamber Music MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Collaborative Piano and Chamber Music.

### About the Program

The master's degree in Collaborative Piano and Chamber Music is designed to prepare pianists to play in small ensembles and to accompany soloists.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Students are trained to:

- listen to the many events occurring simultaneously in ensembles;
- learn how to conduct rehearsals;
- appreciate how text can affect musical performance;
- distinguish between the many different kinds of ensemble participation depending on the media; and
- develop their pianistic skills in order to meet the demands of advanced chamber and accompanied works.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and

internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and complete a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions

credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8416	Piano for Accompanying and Chamber Music Majors	2
MUSC 8417	Piano for Accompanying and Chamber Music Majors	2
MUSC 8418	Piano for Accompanying and Chamber Music Majors	2
MUSC 8419	Piano for Accompanying and Chamber Music Majors	2
MUSC 8471	Recital Accompanying	1
MUSC 8472	Recital Accompanying	1
MUSC 8473	Recital Accompanying	1
MUSC 8474	Recital Accompanying	1
MUSC 8475	Studio Accompanying (2 terms)	2
MUSC 8477	Baroque Keyboard Performance Practice	3
	or MUSC 8478 Classical Keyboard Performance Practice	
MUSC 8510	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUST 8701	Research in Music	3
MUST 8742	Seminar in Theoretical Analysis	3
	or MUST 8746 Seminar in Stylistic Analysis	
<b>Electives <sup>2</sup></b>		<b>3</b>
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition,

Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.



*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of academic terms. Students must arrange their schedules to accommodate this requirement.
2. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:***Comprehensive Final Project:*

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final recital program. (Students enrolled in programs without a recital requirement, such as Opera Coaching, choose two contrasting works studied with their assigned studio teacher.) Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations
- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 20 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 10 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for a May graduation or November 15 for a January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.

Each reader grades the project as either pass or fail. Any student who fails is not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and graded as before. Students who fail a second time are dismissed from the degree program.

*Recital Accompaniment:*

Students must accompany one student recital in the first term and two full senior or master's recitals in each of three succeeding academic terms. In addition, performance of a full chamber music work is required each of the four terms. Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/collaborative-piano-and-chamber-music-mm-bc-cpcm-mmus>

### Department Information:

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-7388

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Dr. Charles Abramovic

charles.abramovic@temple.edu  
215-204-7388

*Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

## Collaborative Piano and Opera Coaching MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Collaborative Piano and Opera Coaching.

### About the Program

The master's degree in Collaborative Piano and Opera Coaching is designed for pianists who wish to make accompanying and opera coaching the focus of their professional lives. Students learn about the many skills required of opera singers, including diction, foreign languages, vocal technique, stage movement and acting. Additionally, students learn to negotiate the often un pianistic piano reductions that are part of this scene. Finally, students learn how to conduct rehearsals in a professional setting, and become aware of the special problems encountered by singers.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1

Spring: November 1

Applications are processed as they arrive. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and complete a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In

addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
MUSC 8212	Coaching Skills (4 terms)	8
MUSC 8416	Piano for Accompanying and Chamber Music Majors	2
MUSC 8417	Piano for Accompanying and Chamber Music Majors	2
MUSC 8418	Piano for Accompanying and Chamber Music Majors	2
MUSC 8419	Piano for Accompanying and Chamber Music Majors	2
MUSC 8471	Recital Accompanying	1
MUSC 8472	Recital Accompanying	1
MUSC 8473	Recital Accompanying	1
MUSC 8474	Recital Accompanying	1
MUST 8701	Research in Music	3
MUST 8708	History of Opera	2
MUST 8709	History of Opera	2
MUST 8742	Seminar in Theoretical Analysis	3
	or MUST 8746 Seminar in Stylistic Analysis	
<b>Total Credit Hours</b>		<b>30</b>

### Additional Requirements:

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of

terms. Students must arrange their schedules to accommodate this requirement.

2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.

- b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

**Incompletes:**

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:***Comprehensive Final Project:*

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final recital program. (Students enrolled in programs without a recital requirement, such as Opera Coaching, choose two contrasting works studied with their assigned studio teacher.) Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations
- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 20 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 10 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for a May graduation or November 15 for a January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the

final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.

Each reader grades the project as either pass or fail. Any student who fails is not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and graded as before. Students who fail a second time are dismissed from the degree program.

*Recital Accompaniment:*

Students must accompany one vocal recital in the first term and at least two in succeeding terms for a total of six required recital accompaniments. Students must also have participated in preparing singers for opera productions and, in some cases, conducted opera rehearsals. Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/collaborative-piano-and-opera-coaching-mm-bc-cpoc-mmus>

**Department Information:**

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-7388

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:***Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

*Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

**Dance MA**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Arts in Dance.

## About the Program

The Dance Department offers programs of study leading to the Master of Arts, Master of Fine Arts, and Doctor of Philosophy degrees. All students are expected to develop a command of the discipline of dance, as a performing art and as both subject and medium of inquiry. The department's mission places high value on the role of dance in a pluralistic, multicultural society.

The MA in Dance is a research-centered degree that allows students to follow and integrate strands in cultural, creative and educational studies of dance. Through coursework blending experiential and theoretical inquiry and an in-depth thesis project, the program prepares students for doctoral education in dance and professional development in research, writing, creative process and pedagogy.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main. All department courses are offered on Main Campus, but students may take out-of-department credits on other campuses.

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interests in Africology and African American Studies, Anthropology, Education, History, Jewish Studies, Media Arts, Music, Philosophy, Sociology, Theater Arts, Women's Studies, and the like.

**Accreditation:** The MA in Dance is pending plan approval by the National Association of Schools of Dance (NASD).

**Areas of Specialization:** The MA in Dance is a research-centered degree that allows students to follow and integrate strands in cultural, creative and educational studies of dance. Through coursework blending experiential and theoretical inquiry and an in-depth thesis project, the program prepares students for doctoral education in dance. It also provides master's-level professional development in research, writing, the creative process and pedagogy.

**Job Prospects:** Graduates perform and choreograph with companies throughout the world, teach at all levels of education, serve as arts administrators and policymakers for the arts, and publish extensively.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take technique classes and some core coursework with permission of the instructor and the department chair. If accepted into the program, those courses (up to a maximum of 9 credits) may be applied toward the degree program.

**Financing Opportunities:** Teaching Assistantships (TAs), Research Assistantships (RAs), and Academic Internships (AIs) are available. Teaching responsibilities usually include teaching university general education courses. On occasion, TAs are assigned to teach BFA Dance courses for which they are qualified. This award includes a monthly stipend, book allowance and tuition remission. Assistantships are generally awarded for a minimum of one year. The TA/RA/AI application is part of the supplemental dance application for admission. Continuing students who have not held an assistantship also submit a written application in the term prior to commencement of the award.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer II:* January 11

All department and university application materials must be received by the Dance Department. After acceptance at the department level, final review of all application materials is made by the Boyer College of Music and Dance.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from qualified representatives of academic or professional communities in dance.

**Coursework Required for Admission Consideration:** Applicants should have an undergraduate GPA of 3.0, and an undergraduate degree in Dance or equivalent professional experience. Depending on the individual's professional goals, certain prerequisite courses may be assigned to fill in any gaps in preparation.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required.

**Statement of Goals:** In three to five typed pages, address how your experience and education have prepared you for advanced study in dance and how the degree will support your professional goals.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** A current resume detailing experience in dance, art, education, scholarship and/or public leadership is required.

**Writing Sample:** A recent scholarly or academic research paper must be submitted as a writing sample.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the MA in Dance program. Transfer credits must be approved by the Graduate Coordinator, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
DANC 8859	Dancing the City	3
DANC 8861	Dancing Self in Community	3
DANC 8862	Embodied Craft	3
DANC 8872	Educating Dance	3
DANC 8873	Concepts of Culture	3
DANC 9801	Research Methods in Dance	3
<b>Electives</b>		
DANC 8808	Corporeal Improvisation (or a Technique course)	2
Other Dance Electives		6
<b>Research Course</b>		
DANC 9996	Master's Thesis in Dance	4
<b>Total Credit Hours</b>		<b>30</b>

1

Although no credit is earned, attendance is mandatory at the Graduate Tutorial held every Tuesday evening.

**Culminating Event:***Master's Thesis:*

The MA thesis is a substantial research project developed over three terms, culminating in a written thesis of 20,000 words. During Spring term of the first year of full-time study, students carry out bibliographic research, develop an annotated bibliography, and create a thesis proposal in a mentored seminar setting. A thesis advisor, with whom the student works until the completion of the project, is then determined. Prior to graduation, students make a formal presentation of their thesis research for dance faculty, students and invited guests. Detailed guidelines for the MA thesis process and evaluation are found in the Graduate Handbook.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/dance-ma-bc-danc-ma>

**Department Information:**

Dept. of Dance  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
1700 N. Broad Street, Suite 309  
Philadelphia, PA 19122-0843  
dance@temple.edu  
215-204-8710

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:**

*Admissions:*  
Norma Porter  
norma.porter@temple.edu  
215-204-0533

*Coordinator of Graduate Studies:*

Dr. Sherril Dodds  
sherril.dodds@temple.edu  
215-204-4959

*Chairperson:*

Dr. Karen Bond  
karen.bond@temple.edu  
215-204-6280

**Dance MFA**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Fine Arts in Dance.

**About the Program**

The Dance Department offers programs of study leading to the Master of Arts, Master of Fine Arts, and Doctor of Philosophy degrees. All students are expected to develop a command of the discipline of dance, as a performing art and as both subject and medium of inquiry. The department's mission places high value on the role of dance in a pluralistic, multicultural society.

The MFA in Dance develops choreographers and dance artists who are in command of their idiom as a basis for meaningful aesthetic investigation, embodied research and critical inquiry. The program fosters skilled dance making; sensitivity to personal artistic qualities and sources; openness to interdisciplinary perspectives; and awareness of the social, political and historical implications of dance. The MFA seeks to align itself with the evolving aesthetics and pedagogies of professional dance practice, to introduce students to contemporary developments in the field of dance scholarship, and to prepare students to enter the competitive job market.

The emphasis of the MFA in Dance is on providing resources that allow each student to take responsibility for their artistic development and vision. As choreographers, students immerse themselves in studying the craft and persuasion of their art form, study the historical and cultural dimensions of dance, experience a spectrum of valid approaches to issues of communication, and continuously challenge their own artistic viewpoints and directions. As performers, students are expected to engage themselves fully and with personal integrity in the creation, interpretation and presentation of dance works; develop technically and artistically in order to fulfill the varying demands of dance as a performing art; and participate fully in the choreographic process. The MFA in Dance also supports the vision of those students who aspire to work in higher education and other education and community contexts as artist-educators.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main. All department courses are offered on Main Campus, but students may take out-of-department credits on other campuses.

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interests in Africology and African American Studies, Anthropology,

Education, History, Jewish Studies, Media Arts, Music, Philosophy, Sociology, Theater Arts, Women's Studies, and the like.

**Accreditation:** The MFA in Dance is fully accredited by the National Association of Schools of Dance (NASD).

**Areas of Specialization:** The MFA faculty includes internationally known artists and scholars whose work represents a variety of contemporary approaches to choreography, performance and theoretical inquiry in dance. The emphasis of the program is choreographic research. In addition, students have requirements in performance, production, dance education and dance scholarship. An important objective of the MFA program is that each student develop a personal aesthetic that manifests an understanding of their place in the world.

**Job Prospects:** Since the focus of the MFA in Dance is choreography, most graduates continue as independent or affiliated choreographers after graduation. In addition, many teach in higher education or perform professionally.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take technique classes and some core coursework with the permission of the instructor and the department chair. If accepted into the program, those courses (up to a maximum of 9 credits) may be applied toward the degree program.

**Financing Opportunities:** Teaching Assistantships (TAs), Research Assistantships (RAs), and Academic Internships (AIs) are available. Teaching responsibilities usually include teaching university general education courses. On occasion, TAs are assigned to teach BFA Dance repertory, technique or theory courses for which they are qualified. This award includes a monthly stipend, book allowance and tuition remission. Assistantships are generally awarded for a maximum of two years. The TA/RA/AI application is part of the supplemental dance application for admission. Continuing students who have not held an assistantship also submit a written application in the term prior to commencement of the award.

All MFA applicants are considered for departmental nomination for a University fellowship. This university-wide scheme is highly competitive, and recipients are selected by the Graduate School.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 11

All department and university application materials must be received by the Dance Department. After acceptance at the department level, final review of application materials is made by the Boyer College of Music and Dance.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from qualified representatives of academic or professional communities in dance.

**Coursework Required for Admission Consideration:** Applicants should have an undergraduate GPA of 3.0 and an undergraduate degree in Dance or equivalent professional experience. Depending on the

applicant's professional goals, certain prerequisite courses may be assigned to fill in any gaps in preparation.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required.

**Statement of Goals:** In two pages or less, detail your focus and artistic vision in dance. The MFA faculty reviews this document in relation to the audition, choreographic showing, and resume to determine your fit with the MFA program and what the faculty can offer. Curiosity and openness are sought.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** A resume detailing experience in dance, art, education, scholarship and/or public leadership is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the MFA in Dance program. Transfer credits must be approved by the Graduate Coordinator, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 12.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 60*

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
DANC 8812	Performance Environments I: Dance Production	2
DANC 8867	Educational Inquiry in Dance	3
DANC 8868	Graduate Seminar	2
DANC 9801	Research Methods in Dance	3
<b>Studio/Practicum Courses</b>		
DANC 8806	The Creative Process and the Dance Symbol	3
DANC 8808	Corporeal Improvisation	2
DANC 8839	Movement Theater Workshop	3
DANC 8847	Choreographing Philadelphia	3
DANC 8849	Studio Research (taken each of five terms until the Master's Concert and Thesis term)	5
DANC 8861	Dancing Self in Community	3
DANC 8862	Embodied Craft	3
DANC 8866	The Body Politic	3
<b>Critical-Thinking Courses</b>		
DANC 8859	Dancing the City	3
DANC 8872	Educating Dance	3
DANC 8873	Concepts of Culture	3



**Electives**

Dance	3
Outside of Department	6
<b>Master's Thesis Concert</b>	
DANC 9984 Master's Concert in Dance	7
<b>Total Credit Hours</b>	<b>60</b>

**Culminating Events:***Comprehensive Examination:*

The comprehensive examination is designed to evaluate the student's general knowledge in four major areas that are not covered by required courses: dance history, dance in a cultural context, dance education, and dance science. An acceptable level would be equivalent to that acquired from taking a single course in each area covered by the exam.

The comprehensive examination consists of two parts. The short answer section gives students the opportunity to demonstrate knowledge in diverse areas and is taken under supervision, without access to reference materials. The essay section allows students to use any appropriate references and resources. These questions require critical thinking, analysis and specificity. The essay section is completed over a period of days, and students may use any appropriate references as resources.

The comprehensive examination is taken before the first term of study and must be successfully completed before Master's Concert approval. Graduate Faculty appropriate to the MFA degree write the questions. Evaluation of the examination is followed by advising, where needed, as to specific deficient areas, with recommendations made for courses within the graduate dance curriculum that address areas of concern.

*Master's Thesis Concert:*

The Master's Concert is a seven-credit exercise developed over three terms, and culminating in a publicly produced presentation of choreographic work. The Master's Concert generally consists of one major choreographic work designed to demonstrate the candidate's highest achievement of artistry, craft and thinking.

During the Spring term of the second year of full-time study, students identify a thesis advisor, conduct preliminary research, and prepare the thesis concert proposal. The proposal articulates the artistic and intellectual focus of the project, setting out the questions and challenges of the work that will be developed further in the final paper. After the culminating performance, the student submits a written thesis of 8,000 words that documents the choreographic research process and final product, but more crucially also explores the interaction of theory and practice that informs the work, presenting in-depth reflection on strengths, challenges, meanings and projections for future work.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/dance-mfa-bc-danc-mfa>

**Department Information:**

Dept. of Dance  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
1700 N. Broad Street, Suite 309  
Philadelphia, PA 19122-0843

dance@temple.edu  
215-204-8710

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:***Admissions:*

Norma Porter  
norma.porter@temple.edu  
215-204-0533

*Coordinator of Graduate Studies:*

Dr. Sherril Dodds  
sherril.dodds@temple.edu  
215-204-4959

*Chairperson:*

Dr. Karen Bond  
karen.bond@temple.edu  
215-204-6280

**Dance PhD**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Philosophy in Dance.

**About the Program**

The Dance Department offers programs of study leading to the Master of Arts, Master of Fine Arts, and Doctor of Philosophy degrees. All students are expected to develop a command of the discipline of dance, as a performing art and as both subject and medium of inquiry. The department's mission places high value on the role of dance in a pluralistic, multicultural society.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main. All department courses are offered on Main Campus, but students may take out-of-department credits on other campuses.

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interests in Africology and African American Studies, Anthropology, Education, History, Jewish Studies, Media Arts, Music, Philosophy, Sociology, Theater Arts, Women's Studies, and the like.

**Accreditation:** The PhD in Dance is fully accredited by the National Association of Schools of Dance (NASD).

**Areas of Specialization:** Individual doctoral faculty members conduct research studies on African and African American aesthetics; dance as a phenomenon in its own right; dance reconstruction; dance teaching and learning across the life span; feminism and dance; performance theory and practice; philosophical, historical and cultural perspectives of the body and dance, including issues of gender, race and class; and more.

Research expertise of doctoral faculty is in aesthetic, artistic, educational, ethnographic, historical, phenomenological and sociological modes of inquiry in dance.

**Job Prospects:** Graduates perform and choreograph with companies throughout the world, teach at all levels of education, serve as arts administrators and policymakers for the arts, and publish extensively.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take technique classes and some core coursework with the permission of the instructor and the department chair. If accepted into the program, those courses (up to a maximum of 9 credits) may be applied toward the degree program.

**Financing Opportunities:** Teaching Assistantships (TAs), Research Assistantships (RAs), and Academic Internships (AIs) are available. Teaching responsibilities usually include teaching university general education courses. On occasion, TAs are assigned to teach BFA Dance repertory, technique or theory courses for which they are qualified. This award includes a monthly stipend, book allowance and tuition remission. Assistantships are generally awarded for a maximum of two years. The TA/RA/AI application is part of the supplemental dance application for admission. Continuing students who have not held an assistantship also submit a written application in the term prior to commencement of the award.

All PhD applicants are considered for departmental nomination for a University fellowship. This university-wide scheme is highly competitive, and recipients are selected by the Graduate School.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 11

All department and university application materials must be received by the Dance Department. After acceptance at the department level, final review of all application materials is made by the Boyer College of Music and Dance.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from qualified representatives of academic or professional communities in dance.

**Coursework Required for Admission Consideration:** Applicants should have an undergraduate GPA of 3.0, a graduate GPA of 3.4 or above, and transcripts that show a foundational knowledge of dance.

**Master's Degree in Discipline/Related Discipline:** A master's degree in any discipline, in combination with substantial professional or recreational experience in dance, is required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, although it need not be in Dance.

**Statement of Goals:** Address your unique profile as a developing professional in the field of dance, as well as your ability to do original research. Reflect on why the Dance Department, i.e., the research foci of

its doctoral faculty, its mission and its resources, is well matched to your career and educational goals.

### Standardized Test Scores:

GRE/MAT: Not required. If submitted, scores are expected to be at the 50th percentile or above.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

Any students admitted with a TOEFL score below the minimum must pass an English skills course during their first term at Temple University.

**Graduate Interview Day:** All applicants are expected to attend the Dance Department's graduate interview day or to make other arrangements to complete interview day requirements. Subject to approval of the Graduate Coordinator, international applicants may be considered for admission by completing all graduate interview day requirements via video and Skype. The day includes a studio warm-up taught by a member of the faculty, presentation of research or applied practice, development of an on-site writing sample, and an interview with doctoral faculty.

**On-Site Writing Activity:** All applicants take part in an on-site writing activity. Results are considered in the admissions process. Remedial coursework may be required.

**Resume:** A resume that details experience in dance, art, education, scholarship and/or public leadership is required.

**Writing Sample:** A recent scholarly or academic research paper must be submitted as a writing sample.

**Advanced Standing:** Students who enter the PhD program in Dance may be considered for advanced standing, based on relevant coursework. The Dance Doctoral Faculty Committee, with approval of the Associate Dean, awards credits toward advanced standing on a case-by-case basis in the first year of full-time study. The maximum number of advanced standing credits awarded is 33.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 46*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
DANC 8867	Educational Inquiry in Dance	3
DANC 9801	Research Methods in Dance	3
DANC 9873		5
DANC 9991	Directed Research-Dance	1
<b>Electives</b>		
Select courses totaling 28 credits from the following:		28

DANC 9800	Special Topics in Dance
DANC 9831	Moving Across Genres
DANC 9841	Experience, Engagement and Multi-Sensory Inquiry
DANC 9851	Black Performance
DANC 9852	Dancing the Popular
DANC 9862	Bodies, Texts, History
DANC 9889	Dance Field Experience
Any Dance course numbered 8000-9991	
Any Temple graduate course outside the Department of Dance <sup>1</sup>	

**Research Courses**

DANC 9994	Preliminary Examination Preparation	1
DANC 9998	Pre-Dissertation Research	1
DANC 9999	Doctoral Dissertation	4

**Total Credit Hours** 46

1

Advisor approval required.

**Culminating Events:***Qualifying Examination:*

Students take a Qualifying Examination at the end of Fall term in Year 2. The examination covers three areas crucial to doctoral research. Questions are devised in consultation with specialist advisors. Details of the Qualifying Examination are published in the Graduate Handbook.

*Preliminary Exam Projects:*

Upon completion of all required coursework for the degree, students complete two Preliminary Exam Projects, which are submitted for review early in Fall term of Year 3. These include:

1. A position paper presented in view of the dissertation, which was drafted in DANC 9873 in Spring term of Year 2.
2. A course proposal for higher education, which the student began work on in DANC 8867 Educational Inquiry in Dance in Spring term of Year 2.

Through DANC 9994 Preliminary Examination Preparation, the student demonstrates significant achievement of scholarly and professional competencies. The Preliminary Exam Projects must be reviewed and approved by a committee composed of at least three Dance doctoral faculty.

*Dissertation Proposal:*

Through DANC 9998 Pre-Dissertation Research, the student prepares a dissertation proposal that evidences a strong body of work thus far and preparedness to complete the Dance PhD program. A primary advisor and Doctoral Advisory Committee are established upon the student's successful completion of the Preliminary Exam Projects. In consultation with the primary advisor, the student prepares a proposal, including an abstract that is reviewed and approved by Dance doctoral faculty. Once approved for defense, the student makes a formal oral presentation of the proposal to the Doctoral Advisory Committee. Upon approval of the dissertation proposal, the student is elevated to candidacy in the PhD program. The dissertation proposal is normally defended in Spring term of Year 3. Written guidelines for the dissertation proposal are published in the Graduate Handbook.

*Dissertation:*

The dissertation is a substantial piece of original and independent research making a significant contribution to new knowledge in

dance and possibly related fields. Typically, students complete the dissertation and DANC 9999 Doctoral Dissertation in Year 4 or 5, although candidates may submit beyond Year 5 in consultation with their primary advisor. The original Doctoral Advisory Committee may be expanded with additional doctoral faculty from Temple University or other universities, or with doctoral-level experts who work outside a university setting. For purposes of the dissertation defense, the committee must include at least one additional doctoral faculty member who is not from the student's program; so constituted, it becomes the Dissertation Examining Committee. At least one member of the Dissertation Examining Committee must be an "outside examiner," defined as one who has not read the dissertation in progress.

The primary advisor and student confer with the Dissertation Examining Committee to establish a date for oral defense of the dissertation. A majority of the members of the Dissertation Examining Committee must approve the written dissertation and oral defense; once passed, the student has 30 days to complete final revisions. Detailed guidelines for the dissertation process and examination are published in the Graduate Handbook.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/dance-phd-bc-danc-phd>

**Department Information:**

Dept. of Dance  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
1700 N. Broad Street, Suite 309  
Philadelphia, PA 19122-0843  
[dance@temple.edu](mailto:dance@temple.edu)  
215-204-8710

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:***Admissions:*

Norma Porter  
[norma.porter@temple.edu](mailto:norma.porter@temple.edu)  
215-204-0533

*Coordinator of Graduate Studies:*

Dr. Sherril Dodds  
[sherril.dodds@temple.edu](mailto:sherril.dodds@temple.edu)  
215-204-4959

*Chairperson:*

Dr. Karen Bond  
[karen.bond@temple.edu](mailto:karen.bond@temple.edu)  
215-204-6280

# Instrumental Conducting: Wind-Band Emphasis MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Instrumental Conducting with a Wind-Band Emphasis.

## About the Program

The Instrumental Studies Department offers a program of study leading to the Master of Music in Instrumental Conducting: Wind-Band Emphasis. Students in the program have the opportunity to receive advanced instruction in technique, artistry and scholarship while preparing for success as a conductor-educator in an academic or professional setting.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Students are trained to listen to the many events occurring simultaneously in ensembles; to learn how to conduct rehearsals; to appreciate how text can affect musical performance; to distinguish between the many different kinds of ensemble participation depending on the media; and to develop their pianistic skills in order to meet the demands of advanced chamber and accompanied works.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 1

Applications are processed as they arrive up to the deadline date.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** In a maximum of 1,500 words, describe your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Prescreening Video:** For the prescreening video, the applicant's face and torso must face the camera and include 15 to 20 minutes of rehearsal and 5 to 10 minutes of performance. The video is submitted via Acceptd.

**Written Analysis:** Each applicant must upload to Acceptd a written score analysis of one of the following selections: *Theme and Variations, Op. 43a* by Arnold Schoenberg; *Lincolnshire Posy* by Percy Grainger; or *Chester Overture for Band* by William Schuman.

**Resume:** A professional resume is required. Instrumental teaching experience at the secondary level, community ensemble level, collegiate level, semi-professional level, or professionally is highly encouraged and is favorably viewed in the decision process.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of

success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 32*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8352	Choral Conducting Seminar II	2
MUSC 8535	Private Lessons: Instrumental Conducting Major	2
MUSC 8536	Private Lessons: Instrumental Conducting Major	2
MUSC 8537	Private Lessons: Instrumental Conducting Major	2
MUSC 8538	Private Lessons: Instrumental Conducting Major	2
MUSC 8539	Instrumental Conducting Seminar: Score Analysis, Programming & Interpretation of Wind Ensemble Lit (2 terms)	4
MUSC 8541	Advanced Orchestral Conducting I-II	2
MUSC 8544	Wind Repertory in History: European Antiquity through the 21st Century (2 terms)	4
MUST 8701	Research in Music	3
MUST 8742	Seminar in Theoretical Analysis	3
	or MUST 8746 Seminar in Stylistic Analysis	
MUST 8764	Studies in Performance Practice	3
<b>Electives</b> <sup>1</sup>		<b>3</b>
<b>Total Credit Hours</b>		<b>32</b>

1

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

**Language Examination:** Candidates in Instrumental Conducting: Wind-Band Emphasis must demonstrate competency in foreign language dictions at the time of admission to the program. Where the transcript or pass-off examination does not reveal such competency, the appropriate deficiency course in diction skills must be taken prior to completion of the master's degree.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon

registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Proficiencies in Piano and Musicianship:*

The department evaluates proficiencies in piano and musicianship in the first term of graduate study.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise.

Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Graduate students in non-performing curricula may take up to six credits of applied study toward the degree with the permission of the major advisor. Such non-required lessons may be taken only if the student can pass the normal graduate-level performing audition expected of performance majors. In this event, a fee of \$200, not covered by tuition remission, is charged.

Alternately, a graduate student, regardless of major, with a demonstrable performing proficiency that may not meet the more rigorous requirements of a graduate-level performing audition, may, by audition, qualify to take two credits of applied study per term for graduate credit. These courses carry a fee of \$400 plus tuition and may be applied to the non-performing curriculum for degree credit up to six term hours with the approval of the major advisor. Tuition remission may not be used to cover the private lesson fee.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### *Recitals:*

Students in Instrumental Conducting: Wind-Band Emphasis present two recitals during the two years of study with members of the Wind Symphony, Symphonic Band, Collegiate Band, and other instrumentalists and/or vocalists:

- One is a public chamber recital with a Keynote© presentation, for which the repertoire is selected, with approval, by the student. At least 50 minutes of music are presented on campus in either Rock Hall or Klein Recital Hall, with adjudication by three full-time music faculty members.
- The second is a comprehensive public large ensemble recital, which comprises small and large performances with the Wind Symphony, Symphonic Band, and Collegiate Band throughout the academic year/concert season. The repertoire is selected by the conductor of the ensemble. Performances are presented in Temple Performing Arts Center and adjudicated by two or three full-time music faculty members.

Students must show evidence through Temple University academic records of having taken private lessons up to the time of the concert performances, both chamber and large ensembles.

#### *Program Notes:*

Students in Instrumental Conducting: Wind-Band Emphasis must provide scholarly program notes for compositions performed at public performance recitals, including details about the composer, the historical context, analytical components and inspiration. These are submitted to the Director of Bands four weeks prior to the performance date for review. The notes must be provided with the program at the public performance.

#### *Keynote© or PowerPoint Presentation for Chamber Recital:*

Students in Instrumental Conducting: Wind-Band Emphasis present a 30-minute Keynote© or PowerPoint presentation prior to the public concert. This presentation is presented one hour before the recital or one day prior to the public concert (location arranged by the student). The Keynote© or PowerPoint presentation includes salient and interesting features of the pieces and the program. The Keynote© or PowerPoint presentation is meant to supplement the concert experience for the audience and offer a platform for the student conductor to speak about the music, not to reiterate the printed program notes.

#### *Portfolio:*

Prior to taking the Comprehensive Examination, students in the Instrumental Conducting: Wind-Band Emphasis MM program must submit a portfolio. The portfolio is to include printed concert programs, recordings (audio and visual), resume, transcript, major projects and assignments completed during degree program, presentations, attendance at conferences and symposia, and any other documentation related to experiences in the program. The portfolio is to be submitted during the final term of study for review by the Director of Bands and Director of Athletic Bands.

#### **Culminating Event:**

##### *Comprehensive Examination:*

Taken in the final term of study, this three-part exam is:

1. tailored toward the student's coursework while in the program, and
2. standardized to cover a body of knowledge related to history and repertoire in relation to winds.

The Director of Bands mentors students, creates the exam, and administers the writing and listening portions of the exam. A small committee, including the Director of Bands, the Director of Athletic Bands, and one or two Conducting and/or Music Education (instrumental) faculty, is involved in the creation of the oral portion of the exam. The student is asked questions that are mostly from the major field but also include other areas of music, history, theory and related topics. The department schedules the exam, and the committee grades it pass or fail.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/instrumental-conducting-wind-band-mm-bc-icwb-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[terell.stafford@temple.edu](mailto:terell.stafford@temple.edu)  
215-204-8306

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

*Chairperson:*  
Professor Terell Stafford  
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## Jazz Studies MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Jazz Studies.

### About the Program

The master's degree in Jazz Studies consists of advanced training in Jazz Performance and support academic areas vital to the field. Studio and ensemble experiences are combined with rigorous coursework to provide comprehensive training in performance and scholarship. This broad and rigorous program is built on an ideal blend of performance and academic courses taught by an outstanding faculty. Intensive studio training and the proper blend of supportive academic coursework are designed to prompt students to enhance technical expertise while further honing a unique creative/artistic vision.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 5 graduate credits outside the field of music.

**Accreditation:** This degree program has been submitted for Plan Approval by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument in both solo and ensemble settings combined with academic support areas in music. Students must select a concentration from among these major instruments:

- Bassoon
- Cello
- Clarinet
- Double Bass
- Euphonium
- Flute
- French Horn
- Guitar
- Oboe
- Percussion
- Piano
- Saxophone
- Trombone
- Trumpet
- Tuba
- Viola
- Violin
- Voice

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

#### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into an applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 71
- IELTS Academic: 6.5
- PTE Academic: 49

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8100	Jazz Ensemble (4 terms) <sup>1</sup>	4
MUST 8104	Jazz Major	3
MUST 8114	Jazz Major	3
MUST 8124	Jazz Major	3
Jazz Seminars or Jazz Special Topics Courses		9
<b>Electives</b> <sup>2</sup>		<b>5</b>
<b>Final Project</b>		
MUST 8184	Jazz Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

All entering Master of Music students in Jazz Studies are required to take Diagnostic Examinations in Jazz Theory and Jazz Styles and Analysis prior to the first term of graduate study. The purpose of these examinations is to determine weaknesses in undergraduate preparation. Depending on the examination results, students may be required to take one or more remedial courses. In these instances, the remedial courses will be graded on a "Credit / No Credit" basis and the official university transcript will indicate "CR" (for "Credit," meaning that the deficiency has been satisfied) or "NC" (for "No Credit," meaning that the deficiency has not been satisfied). Students must have a "B-" or better average in any remedial course or section thereof to earn the grade of "Credit" and to satisfy the requirement. Students who earn a grade of "NC" (that is, having a class average below "B-") must retake that course or section until an average of "B-" or higher is achieved and a grade of "CR" is recorded on the official university transcript.

Remedial courses are offered for undergraduate credit only, and may not count toward graduate degree requirements. Students may take the test only once, and if they do not pass the test or any portion thereof, they must enroll in the remedial course(s) during their first term of study. Depending on which section(s) of the examination are failed, the examiners will stipulate which sections of remedial coursework the student must take. The courses are:

Code	Title	Credit Hours
MUST 5105	Remedial Studies in Jazz History	1-3
MUST 5106	Remedial Studies in Jazz Theory	1-3



The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who

1. matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
2. received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in Jazz Studies must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$500 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Final Project:*

Embedded in MUST 8184 Jazz Major (Recital), the final project is based on the total studio experience and the final recital, the program of which demonstrates completed research, composition and arranging.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree [MUST 8184 Jazz Major (Recital)]. Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the

time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/jazz-studies-mm-bc-jzst-mmus>

### Department Information:

Jazz Studies Program  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Director:*  
Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music MA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Arts in Music.

### About the Program

The Master of Arts in Music program is designed for students who wish to prepare for entrance into a doctoral program in music. The program is also intended for performers with academic interests who envision teaching music composition, music theory or musicology in the classroom. It is a music-generalist degree program, especially for students who are preparing to teach music composition, music history or music theory as a secondary area in a college or university. The degree does not, however, supplant the MM degrees in Music Composition, Music History, or Music Theory, which examine only one area and are

intended to prepare students for a more focused research-based PhD program.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** Accreditation is being sought from the National Association of Schools of Music (NASM).

**Areas of Specialization:** Within the prescribed credits for the MA in Music, students can focus their studies on music composition, music theory or musicology.

**Job Prospects:** The program prepares students for various careers related to music and for further academic training at the doctoral level.

**Non-Matriculated Student Policy:** With permission from the Dean's Office, individuals may be granted permission to enter the College as a non-matriculated student, taking up to 9 graduate credits (excluding private lessons) before applying for admission to a program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Decisions regarding admission are rendered after receipt of all required credentials. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** The bachelor's degree in Music may be in any concentration: composition, education, performance, and more.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8749	Current Topics in Musicology and Theory	3
<b>Focused Electives</b>		<b>9</b>
Select courses in Music Composition, Music History, or Music Theory		
<b>Free Electives</b> <sup>1</sup>		<b>15</b>
<b>Total Credit Hours</b>		<b>30</b>

1

Students work with an advisor to select courses that align with their interests in music composition, music theory, musicology, or a cognate area such as performance.

**Language Examination:** To complete the degree, students must fulfill a foreign language requirement in French, German, Italian, Spanish, or another language with approval of the chair. This requirement may be fulfilled in any one of three ways:

1. The student successfully completed four semesters of a foreign language as an undergraduate.
2. The student passes a foreign language examination with the requisite language department.
3. The student takes four terms of a foreign language. Since language credits are at the undergraduate level, they do not count toward the MA degree, but they do fulfill the language requirement.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required for all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present.

Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Piano Proficiency Examination:*

Before the end of their course of study, students in the Music MA program must take a piano proficiency exam, consisting of the following elements:

1. A Bach chorale (prepared).
2. The exposition of a symphony from the 18th or 19th centuries (prepared).
3. The accompaniment of a song (German Lied or French Chanson; prepared).

#### **Culminating Events:**

##### *Comprehensive Examination:*

In their final term of study, students in the Music MA program take a three-hour comprehensive exam. Members of the department, appointed by the chair, devise the exam based on the coursework the student has taken for the degree.

##### *Final Project:*

The final project is an expanded version of a paper or music composition completed in a seminar. The result is intended to be suitable for use when applying to doctoral programs or to show an ability to teach in a particular area. Students submit a written paper in music theory or musicology OR one composition project to their advisor.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-ma-bc-musc-ma>

### Department Information:

Dept. of Music Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)

215-204-8316

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

#### *Admissions:*

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

#### *Program Coordinator:*

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

#### *Chairperson:*

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

## Music MS

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Science in Music.

## About the Program

The Master of Science in Music program is designed for graduate students who wish to broaden their experience in music and combine research and practice at the graduate level. This is a music-generalist degree program that allows students to experience graduate-level instruction that connects research to creative work and problem-solving in a field of practice, as well as expands students' major performing medium or allows them to explore performance media other than their undergraduate major. The degree does not, however, supplant the MM degrees in classical or jazz performance.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** Accreditation is being sought from the National Association of Schools of Music (NASM).

**Areas of Specialization:** Within the prescribed credits for the MS in Music, students can focus their studies on instrumental music, keyboards or voice.

**Job Prospects:** The program prepares students for various careers related to music and for further academic training at the doctoral level.

**Non-Matriculated Student Policy:** With permission from the Dean's Office, individuals may be granted permission to enter the College as a non-matriculated student, taking up to 9 graduate credits (excluding private lessons) before applying for admission to a program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1

Decisions regarding admission are rendered after receipt of all required credentials. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** The bachelor's degree in Music may be in any concentration: composition, education, history, performance, theory, therapy, and more.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Audition:** No audition is required for entry to the program, but students do complete an audition for placement in voice lessons and auditioned ensembles at the beginning of the first academic term.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within

"University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8704	Music in History	3
MUST 8741	Analytical Techniques	3
<b>Lesson Courses in Voice, Keyboards, or Instrumental Music</b>		
Select one from the following:		2
MUSC 5201	Applied Vocal Graduate Minor	
MUSC 5401	Applied Keyboard Graduate Minor	
MUSC 5501	Applied Instrumental Graduate Minor	
Select one from the following:		2
MUSC 5202	Applied Vocal Graduate Minor	
MUSC 5402	Applied Keyboard Graduate Minor	
MUSC 5502	Applied Instrumental Graduate Minor	
Select one from the following:		2
MUSC 5203	Applied Vocal Graduate Minor	
MUSC 5403	Applied Keyboard Graduate Minor	
MUSC 5503	Applied Instrumental Graduate Minor	
<b>Ensemble Courses</b> <sup>1</sup>		<b>3</b>
<b>Electives</b>		
Select two courses in Music History or Music Theory		6
Select two courses in Dance, Music, Music Education, Music Studies, or Musical Theater		6
<b>Total Credit Hours</b>		<b>30</b>

1

Three 1-credit ensemble courses are taken in Instrumental Music or Voice.

**Language Examination:** A language examination is not required for the MS in Music.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

**A. Graduate Diagnostic Examination in Aural Theory**

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

**B. Graduate Diagnostic Examination in Written Theory**

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

**C. Graduate Diagnostic Examination in Music History**

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

**D. Conditions for Exemption from Diagnostic Examinations**

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

**Culminating Events:**

*Final Project:*

As a culminating event, students choose to complete an advisor-approved paper, make a presentation, or deliver a performance that connects research to practice. The paper or program verifying the presentation or performance is placed on file in the Associate Dean's office prior to graduation.

**Contacts**

**Program Web Address:**

<https://www.temple.edu/academics/degree-programs/music-ms-bc-musc-ms>

**Department Information:**

Dept. of Music Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:**

*Admissions:*

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

*Program Coordinator:*

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

*Chairperson:*

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

**Music PhD**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Philosophy in Music.

## About the Program

The Music PhD program includes four concentrations: Composition, Music Studies, Music Theory, and Musicology. Each concentration includes a small core of required courses, allowing students to develop their remaining coursework with an advisor to focus on their particular scholarly or creative interests. The concentration in Music Studies allows students to combine disciplines (e.g., Music Theory/Composition or Musicology/Music Theory) in order to face the changes evident in the scholarly/creative fields in music departments throughout the world.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The Music PhD program includes four concentrations:

- Composition
- Music Studies
- Music Theory
- Musicology

**Job Prospects:** Graduates of the program typically find employment in professional music organizations throughout the world and in colleges and universities, among other employment venues in the music profession.

**Non-Matriculated Student Policy:** At the discretion of the department, an applicant may be permitted to enroll for up to 9 graduate credits as a non-matriculated student on a probationary basis, permitting them to attend classes and develop sufficient evidence of compositional talent beyond what is demonstrated at the time of application to qualify for full acceptance into the program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 1

Decisions regarding admission are rendered after all required credentials have been submitted and the admissions application is complete.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Master's Degree in Discipline/Related Discipline:** For each of the four concentrations, the following master's degree is expected:

Composition

A degree in Music is expected; a degree in Composition is preferred.

Music Studies

A degree in Music is expected.

Music Theory

A degree in Music is expected; a degree in Music Theory is preferred.

Musicology

A degree in Music is expected; a degree in Musicology/Music History is preferred.

**Bachelor's Degree in Discipline/Related Discipline:** For each of the four concentrations, the following baccalaureate degree is expected:

Composition

A degree in Music is expected; a degree in Composition is preferred.

Music Studies

A degree in Music is expected.

Music Theory

A degree in Music is expected; a degree in Music Theory is preferred.

Musicology

A degree in Music is expected; a degree in Musicology/Music History is preferred.

**Statement of Goals:** Share your special interests within the discipline and your expectations for the program.

**Standardized Test Scores:**

GRE/MAT: Required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Portfolio:** For those undertaking the Composition concentration, a portfolio is required. Applicants must submit, via Acceptd, evidence of compositional activity. If an applicant has enrolled in MUST 8740 Seminar in Composition prior to submitting an application for formal admission to

the program in Composition, the work accomplished therein may serve to meet this entrance requirement, if satisfactory.

For the concentrations in [Music Studies](#), [Music Theory](#), and [Musicology](#), a portfolio is not required.

**Resume:** Current resume required.

**Scholarly Paper:** For those undertaking the [Composition](#) concentration, applicants must submit, via Acceptd, one research paper that has no fewer than 12 pages.

For the concentrations in [Music Studies](#), [Music Theory](#), and [Musicology](#), applicants must submit, via Acceptd, two research papers on contrasting topics. Each paper must be no fewer than 12 pages in length.

**Advanced Standing:** The Music PhD program consists of 42 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 42 required credits of the doctoral degree. However, students may transfer into the doctoral degree up to 12 graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the PhD degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Other:** The program provides the opportunity for advanced study in music that conforms to the very highest artistic and pedagogical ideals. For this reason, enrollment in the program is limited.

Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 42*

*Required Courses:*

### Composition Concentration

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8740	Seminar in Composition (4 terms)	12
MUST 8749	Current Topics in Musicology and Theory	3
Select two from the following:		6
MUST 9702	Doctoral Seminar in Music Studies: Music Theory	

MUST 9703	Doctoral Seminar in Music Studies: Music History	
MUST 9704	Doctoral Seminar in Music Studies: Music Composition	
<b>Electives</b> <sup>1</sup>		<b>12</b>
<b>Research Course</b>		
MUST 9999	Dissertation/Monograph Research	6
<b>Total Credit Hours</b>		<b>42</b>

1

Student selects no fewer than 12 credits in consultation with an advisor, and with approval of the Chair of Music Studies and the Associate Dean for Student Affairs.

### Music Studies Concentration

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8731	The Pedagogy of Music Theory	3
	or MUST 8737 History and Pedagogy of Musicology	
MUST 8743	Seminar in Stylistic Analysis	3
MUST 8749	Current Topics in Musicology and Theory	3
Select two from the following:		6
MUST 9702	Doctoral Seminar in Music Studies: Music Theory	
MUST 9703	Doctoral Seminar in Music Studies: Music History	
MUST 9704	Doctoral Seminar in Music Studies: Music Composition	
<b>Electives</b> <sup>1</sup>		<b>18</b>
<b>Research Course</b>		
MUST 9999	Dissertation/Monograph Research	6
<b>Total Credit Hours</b>		<b>42</b>

1

Student selects no fewer than 18 credits in consultation with an advisor, and with approval of the Chair of Music Studies and the Associate Dean for Student Affairs.

### Music Theory Concentration

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8739	Schenkerian Analysis 2	3
	or MUST 8771 Post-Tonal Theory II	
MUST 8743	Seminar in Stylistic Analysis	3
MUST 8749	Current Topics in Musicology and Theory	3
Select two from the following:		6
MUST 9702	Doctoral Seminar in Music Studies: Music Theory	
MUST 9703	Doctoral Seminar in Music Studies: Music History	
MUST 9704	Doctoral Seminar in Music Studies: Music Composition	
<b>Electives</b> <sup>1</sup>		<b>18</b>
<b>Research Course</b>		



MUST 9999	Dissertation/Monograph Research	6
<b>Total Credit Hours</b>		<b>42</b>

1

Student selects no fewer than 18 credits in consultation with an advisor, and with approval of the Chair of Music Studies and the Associate Dean for Student Affairs.

## Musicology Concentration

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8737	History and Pedagogy of Musicology	3
MUST 8738	Schenkerian Analysis 1	3
	or MUST 8748 Seminar in Post-Tonal Theory	
MUST 8743	Seminar in Stylistic Analysis	3
MUST 8749	Current Topics in Musicology and Theory	3
Select two from the following:		6
MUST 9702	Doctoral Seminar in Music Studies: Music Theory	
MUST 9703	Doctoral Seminar in Music Studies: Music History	
MUST 9704	Doctoral Seminar in Music Studies: Music Composition	
<b>Electives</b> <sup>1</sup>		<b>15</b>
<b>Research Course</b>		
MUST 9999	Dissertation/Monograph Research	6
<b>Total Credit Hours</b>		<b>42</b>

1

Student selects no fewer than 15 credits in consultation with an advisor, and with approval of the Chair of Music Studies and the Associate Dean for Student Affairs.

**Language Examination:** Prior to the dissertation proposal, students are required to pass two foreign language exams, with preference among German, French and Italian. Students may choose a different language if it relates to their dissertation research. The Chair of the Music Studies Department must approve a language exam outside of German, French and Italian.

### Additional Requirements:

All degree credits are to be earned at Temple University.

#### Written Entrance Examinations:

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. If the examinations are failed a second time, remediation must occur. Students are advised by departmental faculty who develop a remediation plan according to the student's needs. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate

secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam (required only for the Composition and Music Theory concentrations): From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Composition Exam (required only for the Composition concentration): This examination includes essay questions on stylistic analysis and historical context, the writing of a figured bass line, and the Piano Performance Examination.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Composition Portfolio* (required only for the Composition concentration): Scores of completed compositions in various media must be submitted on or before the date of the Piano Performance Examination. Tapes of works in electronic media may also be submitted with or without graphic representation. All such submitted work of these designations should indicate the composer's abilities to use effectively both instrumental and vocal media, and, if appropriate, electronic media.

#### Piano Performance Examination:

Prior to the examination, the following should be prepared:

1. A twentieth-century work for piano of sufficient technical difficulty and expressive scope to demonstrate at least medium ability.
2. Score-reading a section of a nineteenth- or twentieth-century orchestral score.

In addition, the following is given for sight-reading:

1. Bach chorale.
2. Eighteenth-century orchestral score, in part.
3. Realization of a figured bass.

If the applicant in Composition gives evidence of outstanding ability to work in computer synthesis of music and has an educational background to support this kind of musical composition rather than one oriented to a more traditional performing medium, dispensation of the performance requirement may be made by the department, based on the applicant's evidence of skills related to the above or to other specialized modes of musical composition. If admitted on these qualifications in lieu of performance ability, the applicant is required to undertake sufficient work at the piano to enable them to perform, as a minimum requirement, a prepared chorale harmonization by Bach and a relatively simple orchestral score, also prepared in advance.

#### Recital (required only for the Composition concentration):

A recital of the student's music of chamber dimension is presented as a public event, with the performances the responsibility of the composer-candidate. A faculty committee selected from relevant performance and academic, as well as compositional, areas is asked to attend this recital

and to participate in an oral critique of the recital as a whole with the composer-candidate. This is held at a designated time closely following the recital as set by the department chair. This recital must take place prior to the preliminary examination.

With departmental permission, a student may request a waiver of the recital requirement by presenting scores and recordings of five compositions that have received professional performances. The request must be made in writing to the department chair and a committee convened to review the compositions with the candidate prior to the preliminary examination.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the PhD program in Music until the completion of all coursework.

*Continuation in the PhD Program:*

Each course or seminar requires an end-of-term final grade based on papers presented, recitals prepared, and discussion and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade of less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of academic terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair, and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate

Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Written Preliminary Examination:*

After the student completes coursework, the student and the student's academic advisor agree on a dissertation topic and choose a Doctoral Advisory Committee (DAC). The student presents a written description of the dissertation topic with an accompanying bibliography to the DAC for review. When the committee approves the description and bibliography, a date is set for the Written Preliminary Examination. The examination, composed by the DAC, should test the student's readiness to commence the dissertation. When the student completes the written exam, the DAC convenes an oral defense of the exam. If the defense of the preliminary exam is successful, the student presents a formal dissertation proposal. If the student fails the Written Preliminary Examination, the DAC schedules a second examination.

*Oral Preliminary Examination:*

One week after the completion of the Written Preliminary Examination, the student takes an Oral Preliminary Examination with the DAC.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

*Other:*

Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

**Culminating Events:**

*Proposal:*

Having completed the Written Preliminary Examination, the student's proposal for the dissertation is also complete.

*Dissertation:*

For the Composition concentration, the dissertation consists of two parts:

1. An original composition of dimension approved by the advisor for full or chamber orchestra with or without soloists, or for voices and orchestra, or other approved media.
2. A short research paper suitable for publication.

Early in the term in which a defense of the dissertation is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the dissertation with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the dissertation and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

For those in the [Music Studies](#), [Music Theory](#), and [Musicology](#) concentrations, the completed dissertation demonstrates the capability to integrate coursework; identify a viable research topic; develop an appropriate research design; systematically gain evidence toward resolving the stated problem; and write, defend and publicize the results in a professional manner. When the dissertation is complete and approved by the major advisor, the major advisor of the DAC asks the Associate Dean to appoint an "outside" reader, who is a graduate faculty member from Temple or another university, but not from the faculty of the student's home department. The DAC plus the outside reader comprise the Dissertation Examining Committee (DEC) for the oral defense. The DEC is formed early in the term in which a defense is anticipated.

One month prior to the requested defense date, the "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," must be submitted to the Associate Dean bearing all appropriate signatures. This form is available in the Main Office and on the Graduate School website. Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and vote to pass or fail the dissertation and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-phd-bc-musc-phd>

### Department Information:

Dept. of Music Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079

[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

### Program Coordinator:

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

### Chairperson:

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

## Music Composition MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Composition.

## About the Program

The Master of Music in Composition is a regimen of professional training spanning the gamut of traditional academic studies from counterpoint to experimental studies in subjects such as software synthesis. The master's program encourages the composer of demonstrated accomplishment to develop a personal voice through private study with at least two members of the Composition faculty.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Job Prospects:** The program prepares students for various careers related to music, as well as for further academic and musical training at the doctoral level.

**Non-Matriculated Student Policy:** With permission from the Dean's Office, individuals may be granted permission to enter the College as a non-matriculated student, taking up to 9 graduate credits (excluding private lessons) before applying for admission to a program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom

assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15

*Spring:* October 15

Decisions regarding admission are rendered after all required credentials have been submitted and the admissions application is complete.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** The composition portfolio should demonstrate the student's skills in music composition.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews,

recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8726	Computer Synthesis	3
MUST 8740	Seminar in Composition (4 terms)	12
Select two from the following:		6
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
<b>Electives</b> <sup>1</sup>		<b>9</b>
Recommended courses include:		
MUST 8701	Research in Music	
MUST 8713	Canon and Fugue	
MUST 8727	Electronic Music Composition: Practice, History, Theory	
MUST 8747	Aesthetics of Music	
<b>Total Credit Hours</b>		<b>30</b>

1

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

**Language Examination:** Reading knowledge of a foreign language is expected. If a deficiency exists, students may be required to take up to two terms of a foreign language.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon

registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Piano Examination:*

Composition majors must pass a functional piano examination encompassing the following points:

1. Score Reading: Prepared in advance of the examination, the scores are to be brought to the examination. The exposition of the first movement of a symphony by Haydn or Mozart is recommended. Suggested scores are the 12 "London" symphonies by Haydn or one

of the last six symphonies by Mozart. Students may elect to play a more difficult score by a later composer.

2. Sight-reading a Bach chorale.
3. Realization of a figured bass.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise.

Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Participation in Ensembles:*

With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair, and the Associate Dean.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

Upon completion of a minimum of 30 credits of graduate study and with the approval of the major advisor, the student may request permission from the Associate Dean of the Boyer College of Music and Dance to take the written qualifying examination. This request must be made in writing at least one month before the scheduled date of the examination. If desired, the student may take this examination during the final term of graduate study. The master's qualifying examination is offered once each term.

The Music Composition Division requires a five-hour written examination that includes the composition of a fugal exposition on a subject provided; the composition of a figured bass; the reduction, analysis and identification of a passage from a provided orchestral work; and two essays about the history and practice of composition. In addition, the division administers a one-hour oral examination consisting of discussion and identification of various orchestral scores. Scheduled by Assistant Dean David Brown, the exam is graded by two members of the department's graduate faculty.

*Portfolio:*

Students are required to submit a portfolio of their work completed during the time they participated in the Master of Music program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/composition-music-mm-bc-comp-mmus>

### Department Information:

Dept. of Music Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

*Chairperson:*

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

## Music Education MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Music Education.

### About the Program

The Master of Music in Music Education degree offers opportunities for advanced studies on broad-based principles and practices in Music Education, as well as theories of learning and teaching, and provides an introduction to research methodology.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main. Also offered fully online for students currently residing in Alaska, Arizona, California, Colorado, Hawaii, Idaho, Illinois,

Maine, Montana, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Wisconsin and Wyoming. Whether enrolling in the in-class or the online program, students must already hold teacher certification in at least one state.

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The Music Education programs at Boyer College of Music and Dance are fully accredited by the National Association of Schools of Music (NASM), the Pennsylvania Department of Education, and the National Council for Accreditation of Teacher Education (NCATE).

**Areas of Specialization:** The MM in Music Education provides opportunities for advanced study through specialization in either music education practice or music education research. This program of study is designed for students intending to pursue a doctoral degree in Music Education, those seeking permanent certification in Pennsylvania. or those who view the degree as terminal.

**Job Prospects:** Students typically find employment in educational systems and also within the music industry. The program also is recommended for those who plan to pursue a doctoral degree in Music Education.

**Non-Matriculated Student Policy:** With permission from the Dean's Office, individuals may be granted permission to enter the College as a non-matriculated student, taking up to 9 graduate credits (excluding private lessons) before applying for admission to a program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 1

*Spring:* November 15

Decisions regarding admission are rendered after all required credentials have been submitted and the admissions application is complete.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study. Applicants who received a bachelor's

degree from the Boyer College of Music and Dance within the previous 12 months are exempt from this requirement.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music Education is required.

**Statement of Goals:** Provide a written account of your accomplishments to date, goals and expectations for the program, goals for beyond the program, and special interests in the discipline.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61

**Resume:** Your current resume must be submitted in paper form with other supporting application materials and forwarded electronically to the department chair.

**Academic and Musical Profile (AMP):** The Academic and Musical Profile (AMP) consists of two parts:

1. Performance: Applicants must submit a digital video of representative instruction episodes that adequately demonstrate both teaching skills and musicianship. The tape should be no more than 15 minutes in duration and may include any type of music teaching. Applicants should include a brief written narrative explaining the contents of the video.
2. Written: This examination is completed by the applicant during the on-campus interview visit. The applicant has 90 minutes to demonstrate writing skills and general knowledge about music education. The exam is scored by Music Education faculty. Results are considered in the admissions decision. Additional coursework may be required to remediate inadequacies.

**Teaching Certification:** Applicants must be certified to teach in at least one state in the United States. A copy of the teaching certificate must be submitted.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the

Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

Applicants are encouraged, but not required, to submit any additional information that will help the faculty making an admissions decision. Additional items may include, but are not limited to, digital recordings of compositions or arrangements, recordings of performance groups, lesson or rehearsal plans, curriculum development material, and recital performance recordings.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
<b>Core Courses</b>		
MUED 8651	Psych Music Lrn & Behav	3
MUED 8652	Measurement and Evaluation in Music	3
MUED 8653	Learning Theory in Music	3
MUED 8661	Research in Music Education	3
<b>Electives</b>		
Additional Music Education Courses		6
Coursework in Supporting Areas <sup>2</sup>		9
<b>Capstone Course</b>		
MUED 9995	Master's Final Project	3
	or MUED 9996 Master's Thesis Music Education	
<b>Total Credit Hours</b>		<b>30</b>

1

All MM coursework stresses the acquisition of advanced knowledge of the theory of teaching and learning, as well as principles of and practices in Music Education.

2

"Supporting areas" include, for example, ethnomusicology, music history and music theory.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon

registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of

Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Applied Study:*

1. Graduate students in non-performing curricula may take up to 6 credits of applied study toward the degree with the permission of the major advisor, department chair, and the chair of vocal or instrumental studies. Such non-required lessons may be taken only if the student can pass the normal graduate-level performing audition expected of performance majors. In this event, a fee of \$200, not covered by tuition remission, is charged.
2. Regardless of major, graduate students with a demonstrable performing proficiency that may not meet the more rigorous requirements of a graduate-level audition may, by audition, qualify to take 2 credits of applied study per term for graduate credit. These courses carry a fee of \$400 plus tuition and may be applied to the non-performing curriculum for degree credit. Up to 6 credits may be taken with the approval of the major advisor.
3. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson or Recital Extension fees.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Event:**

##### *Comprehensive Oral Examination:*

Students in the Music Education MM program must take a comprehensive oral examination as part of the capstone course. The choice of capstone course must be declared no later than the second term of study following discussion with the academic advisor:

- MUED 9995 Master's Final Project: The comprehensive oral examination is part of the oral defense of the final project. It is scheduled individually during finals week. The student is asked to apply coursework materials to concepts covered in the final written project. The Defense Examining Committee presides and evaluates.



- MUED 9996 Master's Thesis Music Education: The comprehensive oral examination is part of the oral defense of the thesis. The student is asked to apply coursework materials to concepts covered therein. The Defense Examining Committee presides and evaluates.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-education-mm-bc-mued-mmus>

### Department Information:

Dept. of Music Education and Therapy  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance

2001 N. 13th Street  
Philadelphia, PA 19122-6079  
radclef@temple.edu  
215-204-8310

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

#### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

#### Program Coordinator:

Dr. Rollo Dilworth  
radclef@temple.edu  
215-204-8317

#### Chairperson:

Dr. Rollo Dilworth  
radclef@temple.edu  
215-204-8317

## Music Education PhD

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Philosophy in Music Education.

### About the Program

The PhD program in Music Education stresses the development of university teaching skills and research experience. It prepares music educators with advanced skills in quantitative or qualitative research methods to effectively translate research findings into music education practice and develops a cadre of music education professors who can assume leadership roles in the music education profession. Students are offered advanced study through specialization in music education practice and research, focusing on skills development and accountability for a diverse student population in a rapidly changing educational terrain. The program provides a home for those with traditional and non-traditional backgrounds. Its breadth and flexibility allow outstanding opportunities for differences in expertise and focus. The curriculum is

overseen by the academic advisor in concert with the departmental PhD advisory committee.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Interdisciplinary study is encouraged.

**Accreditation:** The Music Education programs at Boyer College of Music and Dance are fully accredited by the National Association of Schools of Music (NASM), the Pennsylvania Department of Education, and the National Council for Accreditation of Teacher Education (NCATE).

**Areas of Specialization:** Students enrolled in the PhD program in Music Education identify an area of scholarly focus while at Temple. Examples include, but are not limited to, arts education, choral education, composition, conducting, dance and movement, early childhood music education, educational administration, educational policy studies, elementary music education, general music education, instrumental education, kinesiology, music history, music theory, psychology, secondary music education, sociology, technology and urban education.

**Job Prospects:** Graduates of the program typically find employment in colleges and universities, public and private educational systems, and other venues in the music industry, or as independent researchers.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 1  
*Spring:* September 15

Decisions regarding admission are rendered after all required credentials have been submitted and the admissions application is complete.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study. Applicants who received a degree from

the Boyer College of Music and Dance within the previous 12 months are exempt from this requirement.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected. At least one degree, whether bachelor's or master's, must be in Music Education.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is required.

**Statement of Goals:** Provide a written account of your accomplishments to date, goals and expectations for the program, goals for beyond the program, and special interests in the discipline.

**Standardized Test Scores:**  
GRE/MAT: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Your current resume must be submitted in paper form with other supporting application materials and forwarded electronically to the department chair.

**Interview:** After the complete admissions application has been received by Temple University, applicants should contact the department at 215-204-8310 to arrange a campus visit and schedule an interview.

**Writing Sample:** Applicants submit a paper that was written while completing the master's degree. This paper should demonstrate the applicant's scholarship and writing ability.

**Academic and Musical Profile (AMP):** The Academic and Musical Profile (AMP) consists of two parts:

1. Performance: Applicants must submit a digital video of representative instruction episodes that adequately demonstrate both teaching skills and musicianship. The recording should be no more than 15 minutes in duration and may include any type of music teaching. Applicants should include a brief written narrative explaining the contents of the video. The digital video is submitted via Acceptd.
2. Written: This examination is completed by the applicant during the on-campus interview visit. The applicant has 90 minutes to demonstrate writing skills and general knowledge about music education, including contemporary theories, practices, problems and trends. The exam is scored by Music Education faculty. Results are considered in the admissions decision. Additional coursework may be required to remediate inadequacies.

**Teaching Certification:** Applicants must be certified to teach in at least one state in the United States. A minimum of three years' successful elementary or secondary teaching experience is required. A copy of the teaching certificate must be submitted.

**Advanced Standing:** The PhD program in Music Education consists of 60 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 60 required credits of the doctoral degree. However, students may transfer into the doctoral degree up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the PhD program and must be approved by the major advisor, the department chair, and the Associate Dean. The maximum number of advanced standing credits awarded is 32.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 60*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUED 8651	Psych Music Lrn & Behav	3
MUED 8672	Supervised Univ Music Tch (2 terms)	2
MUED 8673	Music Tch in Higher Educ	3
MUED 8674	Sem Grad Music Education (2 terms)	2
<b>Electives</b>		
	Music Education <sup>1</sup>	17
	Music Supportive Areas <sup>2</sup>	9
	Cognate Area <sup>3</sup>	18
<b>Research Course</b>		
MUED 9999	Doctoral Dissertation	6
<b>Total Credit Hours</b>		<b>60</b>

1

Electives in Music Education are taken in the Major Area, advised by the academic advisor. These courses are taken in Music Education and research skills development (educational psychology, statistics, etc.). A course of study is developed depending on the candidate's prior experiences and professional goals.

2

Electives in Music Supportive Areas are designed to reinforce musical foundations and musicianship. They include conducting, ethnomusicology, literature, music history, music theory, and performance.

3

After the candidate has been accepted into the program but prior to the first term of study, the candidate declares a cognate area in concert with the academic advisor. The candidate and faculty advisor then develop a general course of study appropriate to the cognate area. The course of study becomes the curriculum that guides the student and faculty advisor throughout the degree program. During the first year of study, students may opt to modify the course of study and/or cognate area in consultation with the advisor. Following the first year of study, the cognate area and general course of study become binding.

#### **Additional Requirements:**

##### *Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed. If the examinations are failed a second time, remediation must occur. Students are advised by departmental faculty who develop a remediation plan according to the student's needs.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.

##### *Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the PhD program in Music Education until completion of all coursework.

##### *Continuation in the PhD Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major

examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade of less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

##### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

##### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

##### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

##### *Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. They should be taken no later than the end of the fifth year. Subject areas are in the major field, as well as in the minor field areas (typically Music History and Music Theory). The written preliminary examinations in Music Education require the student to demonstrate knowledge and the ability to transfer concepts and ideas. The focus is on assessment methods; current issues in Music Education; foundations (psychological, sociological, historical, philosophical); music perception and cognition; musicianship and aesthetic development; research interpretation; research methods; and teaching methods.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times

of the preliminary examinations for which they have been scheduled. A study guide for the Music Education Preliminary Examinations is available in the Music Education Office. Students are advised to prepare written answers to the questions in the study guide.

Faculty members within the student's major and minor subject areas are involved in preparing the examination questions. At least three graduate faculty members independently read and score each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Paper Project:*

While a student is matriculated, completion of at least one pre-dissertation sole-authored article suitable for publication in a refereed journal is required. The paper project must demonstrate the ability to synthesize information and processes of research and go significantly beyond any course assignment. It may not duplicate any previous papers completed by the student outside of the degree program. The work on this paper may begin at any time during coursework and must meet current professional standards for publication. The student works with the academic advisor on planning the paper project as soon as the student matriculates in the program. The academic advisor and department chair must approve all project plans.

*Residency:*

A one-year residency of two contiguous (Fall and Spring) terms is required for PhD candidates. During the residency, internship requirements are met. The residency provides candidates with the opportunity to work closely with a faculty mentor and allows focused time for work toward degree completion with faculty guidance. Candidates with previous University teaching experience may apply for a residency waiver.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

*Other:*

Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

**Culminating Events:**

*Proposal:*

Students work with the major advisor to prepare a proposal. With the knowledge of the major advisor, the student may consult other faculty members. When the major advisor approves the dissertation proposal, an oral defense of the dissertation proposal is scheduled with all Music Education faculty members present. Faculty members must receive a hard copy of the dissertation proposal no fewer than two weeks before the scheduled defense.

After a dissertation proposal has been developed by the student and approved by the major advisor and Music Education faculty at the oral defense, the student prepares a final copy for approval. At the same time, the student identifies the members of the Doctoral Advisory Committee (DAC) in consultation with the major advisor. The major advisor then provides the names of the DAC members to the Associate Dean for consideration. The DAC is appointed officially by the Graduate School. The DAC consists of no fewer than three persons: the student's major advisor, a second person from the department, and a third person from outside the department. Each member of the DAC must sign the final proposal. When all DAC members have signed the title page, the student copies the final proposal and delivers, within 30 days, one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School.

After all coursework is completed, preliminary examinations have been passed, and the dissertation proposal has been accepted by the Music Education faculty, the candidate should register for MUED 9999 Doctoral Dissertation each Fall and Spring term until the dissertation has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUED 9999 during their program as a whole, but must register for a minimum of 1 such credit each term while working on the dissertation.

*Dissertation:*

The completed dissertation demonstrates the capability to integrate coursework; identify a viable research topic; develop an appropriate research design; systematically gain evidence toward resolving the stated problem; and write, defend and publicize the results in a professional manner. When the dissertation is complete and approved by the major advisor, the major advisor of the DAC asks the Associate Dean to appoint an outside reader, who is a graduate faculty member from Temple or another university, but not from the faculty of the student's home department. The DAC plus the outside reader comprise the Dissertation Examining Committee (DEC) for the oral defense. The DEC is formed early in the term in which a defense is anticipated.

One month prior to the requested defense date, the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," must be submitted to the Associate Dean bearing all appropriate signatures. Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and vote to pass or fail the dissertation and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-education-phd-bc-mued-phd>

### Department Information:

Dept. of Music Education and Therapy  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
radclef@temple.edu  
215-204-8310

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Dr. Rollo Dilworth  
radclef@temple.edu  
215-204-8317

*Chairperson:*

Dr. Rollo Dilworth  
radclef@temple.edu  
215-204-8317

## Music History MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Music History.

### About the Program

The Master of Music in Music History is intended for those who wish to expand their knowledge of historical styles, genres, composers, periods, music literature and analytical techniques. The program is especially recommended for those who want to pursue a doctoral degree in musicology.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Within the prescribed credits for the MM in Music History, students can focus their studies on traditional Western-oriented music history topics spanning antiquity through the twentieth century.

**Job Prospects:** The program prepares students for various careers related to music and for further academic and musical training at the doctoral level.

**Non-Matriculated Student Policy:** With permission from the Dean's Office, individuals may be granted permission to enter the College as a non-matriculated student, taking up to 9 graduate credits (excluding private lessons) before applying for admission to a program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Decisions regarding admission are rendered after receipt of all required credentials. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S.

institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Writing Sample:** Applicants must submit with the application for admission an undergraduate-level paper demonstrating their ability to do musical analysis and/or report research.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 32*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8749	Current Topics in Musicology and Theory	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
Select four additional Music History courses from MUST 8000 and above		12
<b>Electives</b> <sup>1</sup>		<b>9</b>
<b>Capstone Course</b>		
MUST 9995	Final Project: Music Technology (2 terms)	2
<b>Total Credit Hours</b>		<b>32</b>

1

Select from Music, Music Education, Music Studies, and other graduate departments. Up to 6 credits in applied music study are permitted. Advisor approval required.

**Language Examination:** Reading knowledge of a foreign language is expected. If a deficiency exists, students may be required to take up to four terms of a foreign language.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700

2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Piano Examination:*

Music History majors take a functional piano examination encompassing the following points:

1. Score Reading: Prepared in advance of the examination, the scores are to be brought to the examination. The exposition of the first movement of a symphony by Haydn or Mozart is recommended. Suggested scores are the 12 "London" symphonies by Haydn or one of the last six symphonies by Mozart. Students may elect to play a more difficult score by a later composer.
2. Performing a portion of the score of a four- (or more) part choral work from any period.
3. Accompanying on an elementary lied.
4. Sight-reading a Bach chorale.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming

familiar with the College's statement on plagiarism and academic honesty.

#### *Applied Music Study:*

1. Graduate students in non-performing curricula may take up to 6 credits of applied study toward the degree with the permission of the major advisor. Such non-required lessons may be taken only if the student can pass the normal graduate-level performing audition expected of performance majors. In this event, a fee of \$200, not covered by tuition remission, is charged.
2. Regardless of major, graduate students with a demonstrable performing proficiency that may not meet the more rigorous requirements of a graduate-level audition may, by audition, qualify to take 2 credits of applied study per term for graduate credit. These courses carry a fee of \$400 plus tuition and may be applied to the non-performing curriculum for degree credit. Up to 6 credits may be taken with the approval of the major advisor.
3. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson or Recital Extension fees.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

Upon completion of a minimum of 30 credits of graduate study and with the approval of the major advisor, the student may request permission from the Associate Dean of the Boyer College of Music and Dance to take the written qualifying examination. This request must be made in writing at least one month before the scheduled date of the examination. If desired, the student may take this examination during the final term of graduate study. The master's qualifying examination is offered once each term.

The three-hour written examination in Music History covers topics from the Middle Ages to the present, bibliographic resources, and performance practice. More penetrating questions are included in subject areas that the student has covered in formal situations. Musical scores are included for analysis and discussion. Scheduled by Assistant Dean David Brown, the exam is graded by two members of the department's graduate faculty.

##### *Final Written Project:*

Music History majors write a final written project (MUST 9995 Final Project: Music Technology) that is 50-75 pages in length. This is not a thesis. The project provides an opportunity to utilize and demonstrate the skills acquired in historical, stylistic and analytical research, and also provides a vehicle needed for those interested in applying for doctoral studies. No defense of the final written project is scheduled. The major advisor evaluates and grades the final written project.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/music-history-mm-bc-mhis-mmus>

### **Department Information:**

Dept. of Music Studies

Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
cynthia.folio@temple.edu  
215-204-8316

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Chairperson:

Dr. Cynthia Folio  
cynthia.folio@temple.edu  
215-204-8316

## Music Performance/Bassoon MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

## About the Program

The master's degree in Bassoon Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into an applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.



**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives <sup>2</sup></b>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann

3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
 (a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the

use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Cello MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Cello Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

### Admission Requirements and Deadlines

**Application Deadline:**

Fall: March 1  
Spring: November 1

Applications are processed as they arrive. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

#### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment

Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 32

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUSC 8561	Lower String Pedagogy	2
	or MUSC 8562 Upper String Pedagogy	
MUST 8701	Research in Music	3
<b>Electives<sup>2</sup></b>		<b>7</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>32</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### Diagnostic Examinations:

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

**A. Graduate Diagnostic Examination in Aural Theory**

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

**B. Graduate Diagnostic Examination in Written Theory**

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

**C. Graduate Diagnostic Examination in Music History**

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

**D. Conditions for Exemption from Diagnostic Examinations**

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

**Professional Development Policy:**

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

**Performing Ensembles:**

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of

terms. Students must arrange their schedules to accommodate this requirement.

2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

**University Orchestra:**

At the master's degree level, all bowed string majors must perform in the University Orchestra each term they receive lessons.

**Independent Study Courses:**

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

**Acceptable English:**

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

**Graduate Private Lesson Policy:**

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

**Recital Extension:**

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Clarinet MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Clarinet Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With the approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S.

institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	

<b>Electives</b> <sup>2</sup>	<b>8</b>
<b>Public Recital</b>	
MUSC 8584 Instrumental Major (Recital)	3
<b>Total Credit Hours</b>	<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this



type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

**Contacts**

**Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

**Department Information:**

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:**

*Admissions:*  
James Short

jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*  
Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Classical Guitar MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF  
MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Classical Guitar Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made

only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized

examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives</b> <sup>2</sup>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor

perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number

of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

##### *Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register

for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*  
Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Double Bass MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Double Bass Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The

Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate

Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 32

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3

MUSC 8524	Instrumental Major	3
MUSC 8555	Orchestral Repertoire (2 terms)	2
MUSC 8561	Lower String Pedagogy	2
	or MUSC 8562 Upper String Pedagogy	
MUST 8701	Research in Music	3
<b>Electives <sup>2</sup></b>		<b>7</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>32</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. No more than 2 additional credits of MUSC 8555 Orchestral Repertoire can be taken as an elective. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *University Orchestra:*

At the master's degree level, all bowed string majors must perform in the University Orchestra each term they receive lessons.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu

215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Euphonium MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Euphonium Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.



**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1

Spring: November 1

Applications are processed as they arrive. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives<sup>2</sup></b>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

#### **Additional Requirements:**

##### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann

3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

##### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

##### *Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

##### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

##### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the

use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*

Professor Terell Stafford  
 terell.stafford@temple.edu  
 215-204-8036

## Music Performance/Flute MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Flute Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With the approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment

Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives</b> <sup>2</sup>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and

open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course

is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher,

a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*  
Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/French Horn MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in French Horn Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	

MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives <sup>2</sup></b>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

**A. Graduate Diagnostic Examination in Aural Theory**

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

**B. Graduate Diagnostic Examination in Written Theory**

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.



2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate

Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be

grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Harp MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Harp Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom

assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants,

specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives</b> <sup>2</sup>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

<sup>2</sup>

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*,

master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *University Orchestra:*

At the master's degree level, all bowed string majors must perform in the University Orchestra each term they receive lessons.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject

to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

*Chairperson:*  
Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Harpsichord MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

## About the Program

The master's degree in Harpsichord Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Keyboard Instruction provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With the approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8441	Seminar in Early Keyboard Instruments I	3
MUSC 8477	Baroque Keyboard Performance Practice	3
MUSC 8500	Instrumental Ensemble <sup>1</sup>	1
MUSC 8510	Instrumental Ensemble <sup>1</sup>	1
MUSC 8904	Harpsichord Major	3
MUSC 8914	Harpsichord Major	3
MUSC 8924	Harpsichord Major	3
MUST 8701	Research in Music	3
<b>Electives <sup>2</sup></b>		<b>7</b>
Recommended course includes:		
MUSC 8478	Classical Keyboard Performance Practice	
<b>Public Recital</b>		
MUSC 8984	Harpsichord Major	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

#### Additional Requirements:

##### Diagnostic Examinations:

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### Professional Development Policy:

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### Performing Ensembles:

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.

3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall

term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Final Project:*

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final recital program. (Students enrolled in programs without a recital requirement, such as Opera Coaching, choose two contrasting works studied with their assigned studio teacher.) Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations
- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 20 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 10 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for a May graduation or November 15 for a January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.



Each reader grades the project as either "Pass" or "Fail." If the student fails, they are not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and graded as before. If the student fails a second time, they are dismissed from the degree program.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8984). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A recital approval jury must be formed to demonstrate the student's ability to perform the degree recital successfully. Normally, this occurs at the preceding term's jury. If, by departmental approval, this jury does not occur, then a jury must be scheduled at least four weeks prior to the recital. If the jury is not successfully completed by that time, the department reserves the right to cancel the recital date. Further details are available from the department chair.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-7388

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

*Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

## Music Performance/Oboe MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Oboe Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

#### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives<sup>2</sup></b>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### Diagnostic Examinations:

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special

Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued

a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to

the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Percussion MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Percussion Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble <sup>1</sup>	1
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble <sup>1</sup>	1
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	

MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives</b> <sup>2</sup>		<b>10</b>
Recommended courses include:		
MUSC 8551	Percussion History, Development and Performance Practices	
MUSC 8552	Percussion Pedagogy	
MUSC 8554	Orchestral Repertoire: Percussion	
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

#### Additional Requirements:

##### Diagnostic Examinations:

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

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#### Performing Ensembles:

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
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permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

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Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

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*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu

215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Piano MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

## About the Program

The master's degree in Piano Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Keyboard Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in solo recitals, as well as in large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.



**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8404	Piano Major	3
MUSC 8414	Piano Major	3
MUSC 8424	Piano Major	3
MUSC 8461	Piano Pedagogy I	2
MUSC 8465	Piano Pedagogy II	2
MUSC 8477	Baroque Keyboard Performance Practice	3
MUSC 8478	Classical Keyboard Performance Practice	3
MUSC 8500	Instrumental Ensemble <sup>1</sup>	1
MUSC 8510	Instrumental Ensemble <sup>1</sup>	1
MUST 8701	Research in Music	3
<b>Electives <sup>2</sup></b>		<b>3</b>
<b>Public Recital</b>		
MUSC 8484	Piano Major-Recital	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

### Additional Requirements:

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions

are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and

- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per academic term lesson

fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Final Project:*

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final recital program. (Students enrolled in programs without a recital requirement, such as Opera Coaching, choose two contrasting works studied with their assigned studio teacher.) Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations

- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 20 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 10 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for a May graduation or November 15 for a January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.

Each reader grades the project as either "Pass" or "Fail." If the student fails, they are not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and graded as before. If the student fails a second time, they are dismissed from the degree program.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8484). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A recital approval jury must be formed to demonstrate the student's ability to perform the degree recital successfully. Normally, this occurs at the preceding term's jury. If, by departmental approval, this jury does not occur, then a jury must be scheduled at least four weeks prior to the recital. If the jury is not successfully completed by that time, the department reserves the right to cancel the recital date. Further details are available from the department chair.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Keyboard Studies

Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-7388

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

*Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

## Music Performance/Saxophone MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

## About the Program

The master's degree in Saxophone Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1

Spring: November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Courses Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives<sup>2</sup></b>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

#### Additional Requirements:

##### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

**Acceptable English:**

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

**Graduate Private Lesson Policy:**

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

**Recital Extension:**

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

**Incompletes:**

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:****Comprehensive Examination:**

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

**Public Recital:**

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

**Admissions:**  
James Short  
jshort@temple.edu  
215-204-8598

**Program Coordinator:**  
Eric Schweingruber

eschwein@temple.edu  
215-204-9792

*Chairperson:*  
Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Trombone MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF  
MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Trombone Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based

on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any

one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
	Select one from the following:	3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives</b> <sup>2</sup>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may



be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study

for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by two full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

#### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

#### Program Coordinator:

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

#### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Trumpet MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Trumpet Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional

artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3

MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives <sup>2</sup></b>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required for all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

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Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine

whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Tuba MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Tuba Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1

Applications are processed as they arrive. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor,

the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives<sup>2</sup></b>		<b>8</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. Advisor approval required.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

## A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

## B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

## C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

## D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject

to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

#### *Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### **Department Information:**

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### **Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

### **Department Contacts:**

#### *Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

#### *Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

#### *Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## **Music Performance/Viola MM**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.



## About the Program

The master's degree in Viola Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 32*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUSC 8561	Lower String Pedagogy	2
	or MUSC 8562 Upper String Pedagogy	
MUST 8701	Research in Music	3
<b>Electives</b> <sup>2</sup>		<b>7</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>32</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. No more than 2 credits of MUSC 8555 Orchestral Repertoire can be taken as an elective. Advisor approval required.

#### Additional Requirements:

##### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

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#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.

2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
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3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate

in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*University Orchestra:*

At the master's degree level, all bowed string majors must perform in the University Orchestra each term they receive lessons.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.

- b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

## Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Violin MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

## About the Program

The master's degree in Violin Performance develops expertise beyond baccalaureate-level achievement. Students specialize in the study of the major instrument and take courses outside the major area that support advanced musical and academic development. The Department of Instrumental Studies provides the potential professional performer and/or teacher with the finest instrumental training within the context of a comprehensive university. Students study privately with professional artist-teachers and enjoy opportunities for performance in numerous large and chamber music ensembles.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 32*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUSC 8504	Instrumental Major	3
MUSC 8510	Instrumental Ensemble (4 terms) <sup>1</sup>	4
MUSC 8514	Instrumental Major	3
MUSC 8524	Instrumental Major	3
MUSC 8561	Lower String Pedagogy	2
	or MUSC 8562 Upper String Pedagogy	
MUST 8701	Research in Music	3
<b>Electives</b> <sup>2</sup>		<b>7</b>
<b>Public Recital</b>		
MUSC 8584	Instrumental Major (Recital)	3
<b>Total Credit Hours</b>		<b>32</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. No more than 2 credits of MUSC 8555 Orchestral Repertoire can be taken as an elective. Advisor approval required.

### Additional Requirements:

#### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann

3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
 (a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *University Orchestra:*

At the master's degree level, all bowed string majors must perform in the University Orchestra each term they receive lessons.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

#### *Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8584). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A Recital Permission Form indicating the private teacher's approval for performance of the graduation recital must be signed by the private teacher and submitted six weeks prior to the recital. (If the recital is in the first five weeks of the Spring term, the form must be submitted two weeks before the end of the Fall term.) If required by the private teacher, a Recital Permission Jury must be scheduled at least four weeks prior to the recital. If the form is not submitted or a required jury is not scheduled, the department reserves the right to cancel or postpone the recital.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

#### *Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

#### *Program Coordinator:*

Professor Jeffrey Solow

jeffrey.solow@temple.edu  
215-204-5527

#### *Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Voice MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Performance.

### About the Program

The master's degree in Voice Performance prepares singers for multifaceted careers as well-rounded performers on concert and operatic stages and/or as teachers of voice. The ultimate goal of the program is to produce singing artists capable of competing successfully in the professional world of music.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The program offers a systematic approach to vocal technique; specialized studies in vocal literature; the refinement of language and diction skills; the development of acting techniques; the continued refinement of musical and theoretical skills; advanced study in musical style and performance practice; and the provision of recital, operatic and concert performance opportunities designed to emulate a professional environment.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1

Applications are processed as they arrive. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In

addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8204	Voice Major	3
MUSC 8214	Voice Major	3
MUSC 8220	Opera Workshop (2 terms)	4
MUSC 8224	Voice Major	3
Select two from the following:		4
MUSC 8245	Vocal Literature: Renaissance and Baroque	
MUSC 8246	Vocal Literature: Classical/Bel Canto	
MUSC 8247	Vocal Literature: German Romantic	
MUSC 8248	Vocal Literature: French Romantic	
MUSC 8249	Vocal Literature: Contemporary	
MUST 8701	Research in Music	3
Select one from the following:		3
MUST 8742	Seminar in Theoretical Analysis	
MUST 8743	Seminar in Stylistic Analysis	
MUST 8744	Seminar in Stylistic Analysis	
MUST 8745	Seminar in Stylistic Analysis	
MUST 8746	Seminar in Stylistic Analysis	
MUST 8747	Aesthetics of Music	
MUST 8748	Seminar in Post-Tonal Theory	
MUST 8749	Current Topics in Musicology and Theory	
<b>Electives</b> <sup>1</sup>		<b>4</b>
<b>Public Recital</b>		
MUSC 8284	Voice Major-Recital	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

Select from Music, Music Education, Music Studies, or other graduate departments. At least 3 credits must be in academic, non-performance coursework. No more than 2 credits of MUSC 8215 Vocal Coaching can be taken as an elective. Advisor approval required.

**Language Examination:** Candidates in the Voice Performance program must present undergraduate coursework in French, German and Italian languages (or pass a translating and speaking examination at Temple) at the time of admission. Where the transcript or pass-off examination does not reveal such study, the appropriate deficiency course(s) must be taken prior to completion of the master's degree.

### Additional Requirements:

#### Diagnostic Examinations:

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition,



Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Functional Piano Examination:*

In addition to the written diagnostic examinations required upon entrance to the program, Voice majors take a functional piano examination encompassing the following points:

1. Playing a prepared accompaniment (music can be used).
2. Sight-reading a simple accompaniment.
3. Improvising an accompaniment to a simple melody.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject

to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

#### *Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8284). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-mm-bc-perf-mmus>

### **Department Information:**

Dept. of Vocal Arts  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
christine.anderson@temple.edu  
215-204-8375

### **Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

### **Department Contacts:**

#### *Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

#### *Program Coordinator:*

Dr. Christine Anderson  
christine.anderson@temple.edu  
215-204-8375

#### *Chairperson:*

Dr. Paul Rardin  
rardin@temple.edu  
215-204-4742

## **Music Performance/Bassoon DMA**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

### **About the Program**

The objective of the DMA program in Bassoon Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized. Applicants must arrange for an accompanist for the live audition.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is

available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9562	Double Reed Woodwind Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
	or MUSC 9784 DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
	or MUSC 9702 Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b>		
	Music History	3
	Advanced Music	3
	<b>Minor Area in Music</b> <sup>1</sup>	<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

1

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

### Additional Requirements:

#### *Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

#### *Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

#### *Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

#### *Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals.

Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

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Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided

at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:***Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Cello DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

### About the Program

The objective of the DMA program in Cello Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5

- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A Bach unaccompanied suite (complete).
- A major concerto such as Dvorak, Haydn, Lalo, Schumann, Shostakovich, or Tchaikovsky's *Variations on a Rococo Theme*.
- A sonata of contrasting period/style from the concerto, i.e., Classical period if the concerto is Romantic or Romantic period if the concerto is Classical.
- A virtuoso composition such as *At the Fountain, Elfentanz*, or Weber's *Adagio and Rondo*.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 55 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 55 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 32.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized

examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 55*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500	Instrumental Ensemble	1
	or MUSC 8510 Instrumental Ensemble	
MUSC 9004	Doctoral String Major	3
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9014	Doctoral String Major	3
MUSC 9021	Chamber Music	1
MUSC 9024	Doctoral String Major	3
MUSC 9034	String Major Doctorate	3
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9384	DMA Chamber Recital	1
	or MUSC 9684 DMA Lecture-Recital	
MUSC 9515	Technical and Interpretive Seminar-Strings	2
MUSC 9516	Seminar for String Literature	2
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9567	Lower String Pedagogy	2
MUSC 9784	DMA Performance with Orchestra	1
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Elective in Music History</b>		<b>3</b>
<b>Minor Area in Music</b> <sup>1</sup>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>55</b>

<sup>1</sup>

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9184)
2. Chamber Music Recital (MUSC 9384) or Lecture Recital (MUSC 9684)



3. Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

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After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the

Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the

Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

## Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Clarinet DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Clarinet Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been

recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized. Applicants must arrange for an accompanist for the live audition.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment

Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Master's: 54

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9561	Single Reed Woodwind Ped	2
MUSC 9684	DMA Lecture-Recital	1
	or MUSC 9784 DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
	or MUSC 9702 Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b>		
	Music History	3
	Advanced Music	3
	<b>Minor Area in Music</b> <sup>1</sup>	<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

1

Select from courses at the level of MUSC 8404 or higher.

#### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

#### Additional Requirements:

##### Written Entrance Examinations:

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

##### Diagnostic Recital:

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

##### Continuous Registration:

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

##### Continuation in the DMA Program:

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals

##### Professional Development Policy:

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give

impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year,

and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Double Bass DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Double Bass Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom

assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- Two contrasting movements from a Bach unaccompanied suite.
- A major concerto such as Bottesini, Capuzzi, Dittersdorf, or Koussevitzky.



- A sonata or similar work of contrasting period/style from the concerto, i.e., Classical or 20th Century if the concerto is Romantic, or Romantic or Classical if the concerto is 20th Century.
- A virtuoso composition such as Bottesini, Paganini, Simandl, or the like.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 55 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 55 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 32.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 55*

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500 or MUSC 8510	Instrumental Ensemble	1
MUSC 9004	Doctoral String Major	3
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9014	Doctoral String Major	3
MUSC 9021	Chamber Music	1
MUSC 9024	Doctoral String Major	3
MUSC 9034	String Major Doctorate	3
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9384 or MUSC 9684	DMA Chamber Recital DMA Lecture-Recital	1
MUSC 9515	Technical and Interpretive Seminar-Strings	2
MUSC 9516	Seminar for String Literature	2
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9567	Lower String Pedagogy	2
MUSC 9784	DMA Performance with Orchestra	1
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Elective in Music History</b>		<b>3</b>
<b>Minor Area in Music <sup>1</sup></b>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>55</b>

1

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9184)
2. Chamber Music Recital (MUSC 9384) or Lecture Recital (MUSC 9684)
3. Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

### Additional Requirements:

#### Written Entrance Examinations:

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate

secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and

open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must

be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC,

the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

**Final Recital:**

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

**Proposal:**

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

**Monograph:**

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

**Department Information:**

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:****Admissions:**

James Short  
jshort@temple.edu  
215-204-8598

**Program Coordinator:**

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

**Chairperson:**

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

**Music Performance/Euphonium DMA**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

**About the Program**

The objective of the DMA program in Euphonium Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based

on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: November 15

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3

MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9565	Lower Brass Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
or MUSC 9784	DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
or MUSC 9702	Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b>		
Music History		3
Advanced Music		3
<b>Minor Area in Music</b> <sup>1</sup>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

1

Select from courses at the level of MUSC 8404 or higher.

**Recitals:**

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

**Additional Requirements:***Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

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*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within

the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued

a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

##### *Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

##### *Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### **Department Information:**

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### **Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

### **Department Contacts:**

#### *Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

#### *Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

#### *Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036



# Music Performance/Flute DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Flute Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized. Applicants must arrange for an accompanist for the live audition.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral

program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9564	Flute Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
	or MUSC 9784 DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
	or MUSC 9702 Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3

### Electives

Music History	3
Advanced Music	3
<b>Minor Area in Music</b> <sup>1</sup>	<b>12</b>
<b>Research Course</b>	
MUSC 9999 Monograph Research	6
<b>Total Credit Hours</b>	<b>54</b>

1

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

### Additional Requirements:

*Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

### Diagnostic Recital:

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to

the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's

curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure

in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension

during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
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215-204-8598

*Program Coordinator:*  
Eric Schweingruber  
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215-204-9792

*Chairperson:*  
Professor Terell Stafford  
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## Music Performance/French Horn DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

### About the Program

The objective of the DMA program in French Horn Performance is to foster growth and development of the highest and most sophisticated

expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.

2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9566	Upper Brass Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
	or MUSC 9784 DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
	or MUSC 9702 Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b>		
	Music History	3
	Advanced Music	3
	<b>Minor Area in Music</b> <sup>1</sup>	<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

1

Select from courses at the level of MUSC 8404 or higher.

**Recitals:**

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

**Additional Requirements:***Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study

culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised

by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.



**Final Oral Examination:**

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

**Incompletes:**

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:****Final Recital:**

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

**Proposal:**

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

**Monograph:**

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

**Department Information:**

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:****Admissions:**

James Short  
jshort@temple.edu  
215-204-8598

**Program Coordinator:**

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

**Chairperson:**

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

**Music Performance/Harp DMA**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

**About the Program**

The objective of the DMA program in Harp Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of this program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: November 15

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5

- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A sonata or solo from the Baroque period, e.g., *Sonata in G Major* by C.P.E. Bach.
- A major concerto, e.g., *Harp Concerto* by Ginastera, or *Danse Sacrée et Danse Profane* by Debussy.
- A sonata or major solo from the Romantic or Impressionist period, e.g., Britten's *Suite for Harp in C Major, Op. 83* or Tournier's *Sonatine, Op. 30*.
- A representative 20th-Century work, preferably written after 1950.
- Four orchestral excerpts and/or cadenzas.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 55 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 55 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 32.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews,

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## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 55*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500 or MUSC 8510	Instrumental Ensemble	1
MUSC 9004	Doctoral String Major	3
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9014	Doctoral String Major	3
MUSC 9021	Chamber Music	1
MUSC 9024	Doctoral String Major	3
MUSC 9034	String Major Doctorate	3
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9384 or MUSC 9684	DMA Chamber Recital DMA Lecture-Recital	1
MUSC 9515	Technical and Interpretive Seminar-Strings	2
MUSC 9516	Seminar for String Literature	2
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9567	Lower String Pedagogy	2
MUSC 9784	DMA Performance with Orchestra	1
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Elective in Music History</b>		<b>3</b>
<b>Minor Area in Music</b> <sup>1</sup>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>55</b>

1

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9184)
2. Chamber Music Recital (MUSC 9384) or Lecture Recital (MUSC 9684)

3. Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

### Additional Requirements:

#### *Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

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Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

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*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the

Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the

Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

## Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Historical Keyboard DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Historical Keyboard Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance. Under the guidance of a highly specialized faculty, students are expected to achieve the most advanced level of professional knowledge, training and experience in the performance of solo and ensemble music on historical keyboard instruments. Studies encompass repertoire from approximately the year 1500 up through the present.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program has been submitted for Plan Approval by the National Association of Schools of Music (NASM).

**Areas of Specialization:** To thoroughly prepare for future professional performance opportunities, students learn technique and figured bass, as well as gain a working knowledge of tuning and maintenance assistance. In keeping with the historical basis of the study, 17th- and 18th-century

performance practice are emphasized in all course and studio work to ensure the cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program are qualified to find employment in professional music ensembles throughout the world, in colleges and universities, in private teaching studios, and as professional accompanists and coaches, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- Repertory representing at least three different styles, chosen from German, French, Italian, English, or Iberian works composed prior to 1800.
- Sight-read a simple basso continuo line.

Memorization is not required.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

#### Additional Requirements:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 9 required credits within the Music Studies area.
3. Show transcript evidence at the master's level in the area of performance practices. If no transcript evidence can be presented, students must take up to 6 credits of MUSC 8477 Baroque Keyboard Performance Practice and/or MUSC 8478 Classical Keyboard Performance Practice .

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8441	Seminar in Early Keyboard Instruments I	3
MUSC 8442	Seminar in Early Keyboard Instruments II	3
MUSC 9011	Doctoral Chamber Music	1
MUSC 9104	Historical Keyboard Instruments Major/Doctoral	3
MUSC 9114	Historical Keyboard Instruments Major/Doctoral	3
MUSC 9124	Historical Keyboard Instruments Major/Doctoral	3
MUSC 9134	Historical Keyboard Instruments Major/Doctoral	3
MUSC 9351	Performance Traditions	3
MUSC 9384	DMA Chamber Recital	1
MUSC 9451	Keyboard Literature-Doctoral	2
MUSC 9452	Keyboard Literature-Doctoral	2
MUSC 9684	DMA Lecture-Recital	1
MUSC 9701	Doct Perf Practice I	3
MUSC 9784	DMA Performance with Orchestra	1
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives <sup>1</sup></b>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

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Select from graduate courses in Music Studies (at least 6 credits), Performance Practice, Ensemble, Independent Study, or Special Topics. Advisor permission required.

#### Recitals:

1. Solo public recital, no later than completion of MUSC 9134, with advisor approval
2. Chamber Music Recital (MUSC 9384)
3. Lecture Recital (MUSC 9684)

4. Performance with Orchestra (MUSC 9784)
5. Final Doctoral Recital (MUSC 9984)

**Additional Requirements:**

*Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

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After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the

Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

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*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

## Department Information:

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*DMA in Performance Program Coordinator:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

*Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

## Music Performance/Oboe DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Oboe Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been

recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized. Applicants must arrange for an accompanist for the live audition.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment

Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Master's: 54

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9562	Double Reed Woodwind Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
	or MUSC 9784 DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
	or MUSC 9702 Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b>		
	Music History	3
	Advanced Music	3
	<b>Minor Area in Music</b> <sup>1</sup>	<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

1

Select from courses at the level of MUSC 8404 or higher.

#### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

#### Additional Requirements:

##### Written Entrance Examinations:

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

##### Diagnostic Recital:

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

##### Continuous Registration:

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

##### Continuation in the DMA Program:

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

##### Professional Development Policy:

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give

impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year,

and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Percussion DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Percussion Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom

assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptrd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged.

All works, except sonatas, should be memorized. Applicants must arrange for an accompanist for the live audition.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8180	Special Topics in Percussion (Pedagogy)	2
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3

MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9684	DMA Lecture-Recital	1
or MUSC 9784	DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
or MUSC 9702	Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3

### Electives

Music History	3	
Advanced Music	3	
<b>Minor Area in Music</b> <sup>1</sup>	<b>12</b>	
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>	<b>54</b>	

1

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

### Additional Requirements:

#### *Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
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5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

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All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

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The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

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members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

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For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

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The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued

a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
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3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*  
Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Piano DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

### About the Program

The objective of the DMA program in Piano Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, in private teaching studios, and as professional accompanists and coaches, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

#### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A major work from each of the Baroque, Classical, Romantic, and Impressionistic periods.
- A representative 20th-Century work, e.g., Barber, Bartok, Copland, Hindemith, Prokofiev, and the like.

All works should be memorized.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken

beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

#### Additional Requirements:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.
3. Show transcript evidence at the master's level in the area of performance practices. If no transcript evidence can be presented, students must take up to 6 credits of MUSC 8477 Baroque Keyboard Performance Practice and/or MUSC 8478 Classical Keyboard Performance Practice.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9351	Performance Traditions	3
MUSC 9384	DMA Chamber Recital	1
MUSC 9404	Piano Major/Doctoral	3
MUSC 9414	Piano Major/Doctoral	3
MUSC 9424	Piano Major/Doctoral	3
MUSC 9434	Piano Major Doctorate	3
MUSC 9451	Keyboard Literature-Doctoral	2
MUSC 9452	Keyboard Literature-Doctoral	2
MUSC 9684	DMA Lecture-Recital	1
MUSC 9784	DMA Performance with Orchestra	1
MUSC 9984	DMA Final Recital	1

MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b> <sup>1</sup>		<b>21</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

1

Select from Music Studies (at least 5 credits), Applied Early Keyboard lessons, Composition (with permission from that department), Performance Practice, Piano Pedagogy, or up to 6 credits taken in approved Temple University graduate coursework outside the Boyer College of Music and Dance. The chair of the Department of Keyboard Studies must approve all elective courses.

**Recitals:**

1. Solo public recital, no later than completion of MUSC 9434, with advisor approval
2. Chamber Music Recital (MUSC 9384)
3. Lecture Recital (MUSC 9684)
4. Performance with Orchestra (MUSC 9784)
5. Final Doctoral Recital (MUSC 9984)

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3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:***Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found

in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

**Department Information:**

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-5527

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:***Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*DMA in Performance Program Coordinator:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

*Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

**Music Performance/Trombone DMA**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Trombone Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find

the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.



**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9565	Lower Brass Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
	or MUSC 9784 DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
	or MUSC 9702 Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b>		
	Music History	3
	Advanced Music	3
	<b>Minor Area in Music</b> <sup>1</sup>	<b>12</b>
<b>Research Course</b>		

MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

1

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

### Additional Requirements:

#### Written Entrance Examinations:

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

#### Diagnostic Recital:

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

#### Continuous Registration:

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into

the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure

occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense

on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*  
Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Trumpet DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

### About the Program

The objective of the DMA program in Trumpet Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits

only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9504	Doctoral Instrumental Major	3
MUSC 9514	Doctoral Instrumental Major	3
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9524	Doctoral Instrumental Major	3
MUSC 9534	Doctoral Instrumental Major	3
MUSC 9566	Upper Brass Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
	or MUSC 9784 DMA Performance with Orchestra	
MUSC 9701	Doct Perf Practice I	3
	or MUSC 9702 Doct Perf Practice II	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Electives</b>		
	Music History	3
	Advanced Music	3
<b>Minor Area in Music</b> <sup>1</sup>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>54</b>

<sup>1</sup>

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)

3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

**Additional Requirements:**

*Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major

examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

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Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject

to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

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The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint

an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Tuba DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

### About the Program

The objective of the DMA program in Tuba Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.



**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5

- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- A concerto, sonata, or solo piece from the Classical, Romantic, or Impressionistic period.
- A concerto, sonata, or solo piece from the 20th Century.
- Excerpts from the standard orchestral repertoire.

All works, except sonatas, should be memorized. Applicants must arrange for an accompanist for the live audition.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 54 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 54 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 30.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected

for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 54*

#### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
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MUSC 9534	Doctoral Instrumental Major	3
MUSC 9565	Lower Brass Pedagogy	2
MUSC 9684	DMA Lecture-Recital	1
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<b>Electives</b>		
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Select from courses at the level of MUSC 8404 or higher.

#### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9534)
2. Solo public recital (MUSC 9184)
3. Lecture Recital (MUSC 9684) or Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

#### Additional Requirements:

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After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons:

two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to

register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

##### *Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

##### *Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### **Department Information:**

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
eschwein@temple.edu

215-204-5527

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Eric Schweingruber  
eschwein@temple.edu  
215-204-9792

### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Viola DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Viola Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom

assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Accepd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- Two contrasting movements from a Bach unaccompanied suite.
- A major concerto such as Bartok, Hindemith, Hoffmeister, Stamitz, or Walton.

- A sonata or similar work of contrasting period/style from the concerto, i.e., Classical or 20th Century if the concerto is Romantic, or Romantic or Classical if the concerto is 20th Century.
- A virtuoso composition such as *Allegro di molto* from Haydn's *Divertimento in D Major*, Hummel, Paganini, or Rolla.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 55 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 55 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 32.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 55*

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500 or MUSC 8510	Instrumental Ensemble	1
MUSC 9004	Doctoral String Major	3
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9014	Doctoral String Major	3
MUSC 9021	Chamber Music	1
MUSC 9024	Doctoral String Major	3
MUSC 9034	String Major Doctorate	3
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9384 or MUSC 9684	DMA Chamber Recital DMA Lecture-Recital	1
MUSC 9515	Technical and Interpretive Seminar-Strings	2
MUSC 9516	Seminar for String Literature	2
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9563	Upper String Pedagogy	2
MUSC 9784	DMA Performance with Orchestra	1
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Elective in Music History</b>		<b>3</b>
<b>Minor Area in Music <sup>1</sup></b>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>55</b>

1

Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9184)
2. Chamber Music Recital (MUSC 9384) or Lecture Recital (MUSC 9684)
3. Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

### Additional Requirements:

#### Written Entrance Examinations:

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate

secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and

open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must

be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC,

the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**



#### *Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

#### *Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

#### *Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

#### *Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

#### *Program Coordinator:*

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

#### *Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Violin DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

## About the Program

The objective of the DMA program in Violin Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Diverse areas of study are included to ensure the broadest possible cultivation and expansion of students' talents.

**Job Prospects:** Graduates of the program typically find employment in professional music ensembles throughout the world, in colleges and universities, and in private teaching studios, among other employment venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based

on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: November 15

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
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**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- Two contrasting movements from a Bach unaccompanied sonata or partita. (A chaconne is acceptable on its own.)
- One of the following: Mozart's *Violin Concerto No. 3 in G major, K. 216*; *Violin Concerto No. 4 in D major, K. 218*; or *Violin Concerto No. 5 in A major, K. 219*.
- One major concerto such as Bartok, Beethoven, Brahms, Bruch, Mendelssohn, Mozart, Prokofiev, Shostakovich, Sibelius, or Tchaikovsky.

- One sonata of contrasting period/style from the concerto, i.e., Classical period if the concerto is Romantic or Romantic if the concerto is Classical.
- One virtuoso composition such as Paganini, Sarasate, Wieniawski, and the like.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 55 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 55 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 32.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 55*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8500 or MUSC 8510	Instrumental Ensemble	1
MUSC 9004	Doctoral String Major	3
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9014	Doctoral String Major	3
MUSC 9021	Chamber Music	1
MUSC 9024	Doctoral String Major	3
MUSC 9034	String Major Doctorate	3
MUSC 9184	DMA Solo Public Recital	1
MUSC 9351	Performance Traditions	3
MUSC 9384 or MUSC 9684	DMA Chamber Recital DMA Lecture-Recital	1
MUSC 9515	Technical and Interpretive Seminar-Strings	2
MUSC 9516	Seminar for String Literature	2
MUSC 9517	Advanced Conducting-Doctoral	2
MUSC 9563	Upper String Pedagogy	2
MUSC 9784	DMA Performance with Orchestra	1
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
<b>Elective in Music History</b>		<b>3</b>
<b>Minor Area in Music <sup>1</sup></b>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>55</b>

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Select from courses at the level of MUSC 8404 or higher.

**Recitals:**

1. Solo public recital by the conclusion of the fourth term of lessons (MUSC 9184)
2. Chamber Music Recital (MUSC 9384) or Lecture Recital (MUSC 9684)
3. Performance with Orchestra (MUSC 9784)
4. Final Doctoral Recital (MUSC 9984)

**Additional Requirements:***Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate

secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
4. Form and Analysis Exam: A score is provided at the examination that requires analysis of specified passages.
5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

*Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 45 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

*Continuous Registration:*

Continuous registration of at least 3 credits must be maintained each term, with the exception of Summer, from the time of acceptance into the DMA program in Music Performance until the completion of all coursework.

*Continuation in the DMA Program:*

Each course or seminar requires an end-of-term final grade based on papers prepared, recitals presented, discussion, and/or examinations taken during the course of the term. Each term of private study culminates in a performance examination or jury, except during terms in which the student has presented one of the required adjudicated recitals. Screening for continuance in the program after the first term of study is conducted at adjudicated recitals, end-of-the-term juries, and major examinations. This ensures that only the most qualified students continue beyond the early stages of the program.

For all doctoral programs, only grades from "A" to "B-" can be applied toward degree requirements. Grades of less than "B-" cannot be counted toward the degree. Any student who earns a grade less than "B-" may, with permission of the department chair and the Associate Dean, retake the term of study one additional time. The same applies to recitals.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and

open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.

*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must

be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons: two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC,

the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

### Chairperson:

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Music Performance/Voice DMA

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Musical Arts in Performance.

### About the Program

The objective of the DMA program in Voice Performance is to foster growth and development of the highest and most sophisticated expression of musical interpretation through performance under the guidance of a very highly specialized faculty.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The program offers a systematic approach to vocal technique; specialized studies in vocal literature; the refinement of language and diction skills; the development of acting techniques; the continued refinement of musical and theoretical skills; advanced study in musical style and performance practice; and the provision of recital, operatic and concert performance opportunities designed to emulate a professional environment.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may

be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into an applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. Doctoral candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution. Applicants accepted with deficiencies will find the deficiencies noted in the letter of admission. Deficiencies must be addressed prior to completion of the degree.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who did not earn both their baccalaureate and a master's degree from an institution in the United States must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- TOEFL Essentials: 10.5
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Accepted. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- One recitative and aria from an opera.
- One recitative and aria from an oratorio.
- Four songs or arias selected one each from among the Baroque, Classical, Romantic, Impressionistic, or Contemporary periods. Each selection also must be in a different language (English, German, French, or Italian).

All selections should be memorized.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** Applicants are interviewed by the department chair and Associate Dean at the time of the live audition.

**Scholarly Paper:** Applicants must upload a scholarly paper to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Advanced Standing:** The DMA program in Music Performance consists of 55 discrete credits taken beyond the master's degree. At the time of admission, the entire master's degree serves as advanced standing credits. These credits are not counted toward the 55 required credits of the doctoral degree. However, students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is reviewed after admission to the DMA degree and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 32.

**Additional Requirements:** Applicants must:

1. Include with the application a repertoire list indicating works previously studied. The list should indicate which of the works were performed publicly and, if possible, where and when they were performed.
2. Show transcript evidence at the master's level in the area of bibliographical resources in music. If no transcript evidence is available, students must take MUST 8701 Research in Music in addition to the 6 required credits within the History/Theory area.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 55*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 9011	Doctoral Chamber Music	1
MUSC 9012	Doctoral Chamber Music	1
MUSC 9204	Voice Major/Doctoral	3
MUSC 9214	Voice Major/Doctoral	3
MUSC 9224	Voice Major/Doctoral	3
MUSC 9234	Voice Major Doctorate	3
MUSC 9251	Voice Pedagogy	2
MUSC 9351	Performance Traditions	3
MUSC 9684	DMA Lecture-Recital	1
MUSC 9784	DMA Performance with Orchestra	1
	or MUSC 9884 DMA Major Opera Role	
MUSC 9984	DMA Final Recital	1
MUST 9701	Doctoral Seminar Analysis, Interpretation, and Performance	3
Select 9 credits from the following:		9
MUSC 8245- MUSC 9249	Vocal Literature course(s)	
MUSC 9210	Special Topics in Voice	
MUSC 9220	Special Topics in Voice	
MUSC 9230	Special Topics in Voice	
MUSC 9240	Special Topics in Voice	
MUSC 9250	Special Topics in Vocal Pedagogy	
MUSC 9261	Vocal Pedagogy I	
MUSC 9262	Vocal Pedagogy II	
MUSC 9701	Doct Perf Practice I	
	or MUSC 9702 Doct Perf Practice II	
<b>Elective in Music History</b>		<b>3</b>
<b>Minor Area in Music</b> <sup>1</sup>		<b>12</b>
<b>Research Course</b>		
MUSC 9999	Monograph Research	6
<b>Total Credit Hours</b>		<b>55</b>

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Select from courses at the level of MUSC 8404 or higher.

### Recitals:

1. Solo public recital, no later than completion of MUSC 9234
2. Lecture Recital (MUSC 9684)
3. Performance with Orchestra (MUSC 9784) or Major Opera Role (MUSC 9884)
4. Final Doctoral Recital (MUSC 9984)

**Language Examination:** Candidates in the Voice Performance program are expected to successfully complete a translation examination, specified by the Department of Vocal Arts, in one foreign language: either French, German, Italian, or other national language with department permission. The examination must be completed before the preliminary examinations may be taken.

### Additional Requirements:

*Written Entrance Examinations:*

All doctoral students must take written entrance exams prior to or during the first term of doctoral study. Candidates who fail the entrance

examinations the first time may, upon application to the Associate Dean for Graduate Studies of the Boyer College of Music and Dance, be permitted to take the examinations a second time. A third opportunity is not allowed.

To continue registration in the doctoral program beyond the second term of study, all portions of the examinations must be passed or the appropriate review courses (or the equivalent, as determined by the examining department) must be in progress. Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date.

1. Music History Exam: A general examination covering the history of music is administered. Questions relative to forms, styles and periods of music are included. It is expected that all examinees are acquainted with the standard literature of music.
2. Harmony Exam: This exam involves completion of a harmonic excerpt in advanced chromatic idiom and the creation of a bass line with figuration (figured bass) in Baroque style.
3. Counterpoint Exam: From a given motive, approximately 20 measures of imitative counterpoint in three parts are to be completed.
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5. Literature and Pedagogy Exam: This examination focuses on the literature and pedagogy of the instrument of specialization.
6. Writing Sample: A 90-minute examination of the student's ability to write at the doctoral level is conducted. Examination topics are of a general nature.

#### *Diagnostic Recital:*

A diagnostic recital is required and must be performed before a faculty jury at the conclusion of the first term of study. The candidate must contact their advisor to arrange the jury. The recital consists of a full program, approximately 25-30 minutes in length, and may include the performance (with music) of a new composition that is presented to the applicant for study 48 hours in advance of the jury. An analysis of repertoire and technical needs results.

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#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

The four terms of private lessons must be taken consecutively, with the exception of summers. Any deviation from this must have the approval of the advisor, department chair, and the Associate Dean of the Boyer College of Music and Dance. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson and recital extension fees.



*Written Preliminary Examinations:*

The written preliminary examinations may be taken during the final term of coursework, but no later than in the term after completion of coursework. They are administered several times each calendar year, and span two consecutive days of six hours of examination each day. Written and performance examinations should be taken no later than the end of the fifth year to allow for the successful completion of the Final Recital and the writing of the monograph. Preliminary examinations must be successfully completed before formal work on the monograph may be undertaken and before the Final Recital may be presented.

Students planning to take the written examinations should request a list of dates from the graduate secretary and submit a written request to the Associate Dean one month prior to the administration date. Students are then notified in writing of the specific dates and administration times of the preliminary examinations for which they have been scheduled.

The examinations consist of questions relating to the major and minor areas and to musical style; require the student to comment articulately on the style and historical significance of musical compositions; and entail the student discussing and defending the principles of performance on the basis of which they would undertake to perform any composition in their major area. The questions are prepared by faculty members within the student's major and minor subject areas. At least two graduate faculty members read each section of the written preliminary examinations. Students typically are graded "Pass" or "Fail" based on a consensus of the examination readers.

*Oral Preliminary Examinations:*

For those students who pass the written preliminary examinations, no oral preliminary examination is required. (This refers only to the oral preliminary examination and does not refer in any way to the oral defense of the dissertation/monograph.)

If a student fails one or more portions of the written preliminary examination, an oral examination is administered by the major advisor and a minimum of two additional faculty members. In the case of failure in one subject area, two members of that department are asked by the student's major advisor to participate with the major advisor in the examination. In the case of failure in more than one subject area, at least one faculty member from each of the departments in which the failure occurred is asked by the student's major advisor to participate in the examination.

The examination is to be a formal oral examination rather than an informal meeting with graduate faculty from departments in which the examination revealed that the student needs further work. This does not preclude such informal meetings, however, in preparation for the oral examination. Upon passing the oral examination, the student, as advised by the examining committee, is permitted to schedule a second and final attempt at the failed portions of the written examination.

*Final Recital and Monograph Proposal:*

After the successful completion of the written preliminary examinations, MUSC 9984 DMA Final Recital and written monograph are undertaken in consultation with the major advisor, the department chair, and the Doctoral Advisory Committee (DAC). The DAC shall be appointed by the Associate Dean to adjudicate the Final Recital and to guide the student in writing both the monograph proposal and the final document itself. When the student, in consultation with the major advisor and department chair, has identified a tentative advisory committee, the chair gives those names to the Associate Dean for consideration. The Associate Dean appoints the DAC. The DAC consists of no fewer than three persons:

two faculty members from within the department, and a third person from outside the department. Members of the DAC serve as the adjudicators of the Final Recital.

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School. Students register for MUSC 9999 after the proposal has been officially approved. Doctoral candidates are required to register for a minimum of 6 credit hours of MUSC 9999 Monograph Research during their program as a whole and must register for a minimum of 1 such credit each term.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Final Oral Examination:*

When the monograph is complete, the major advisor of the Doctoral Advisory Committee (DAC) asks the Associate Dean to appoint an outside reader. The DAC plus the outside reader constitute the Dissertation Examining Committee (DEC) for the monograph defense. Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary.

Doctoral candidates must submit a defense copy of the monograph to members of the DEC and the Associate Dean at least two weeks prior to the defense. Students should register for MUSC 9999 Monograph Research (1-6 credits) each term, Fall and Spring, until the final project has been successfully defended. Doctoral candidates are required to

register for a minimum of 6 credit hours of MUSC 9999 during their program as a whole, but must register for a minimum of one such credit each term.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Final Recital:*

Students may present the DMA Final Recital (MUSC 9984) after the preliminary examination has been completed and the DAC has been appointed.

*Proposal:*

After a proposal for the monograph has been developed by the student in consultation with the DAC, the student prepares a final copy for approval. Each member of the DAC must sign the final proposal. Once all DAC members have signed the title page, the student copies the final proposal and delivers one copy to each member of the DAC, the department chair, the Associate Dean, and the Graduate School within 30 days.

*Monograph:*

Early in the term in which a defense of the monograph is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the DAC plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the monograph with the Associate Dean at least one month before the requested defense date. Forms to schedule the defense are available from the graduate secretary. This includes the "Announcement of Oral Defense" form, found in TUportal under the Tools tab within "University Forms," which must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation/monograph to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the Boyer College of Music and Dance. All members of the DEC attend the oral defense and then vote to pass or fail the monograph and its defense after the conclusion of the public presentation.

Changes in membership of a DAC or a DEC must be approved by the Associate Dean. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/performance-dma-bc-perf-dma>

### Department Information:

Dept. of Vocal Arts  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[christine.anderson@temple.edu](mailto:christine.anderson@temple.edu)

215-204-8375

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

*Program Coordinator:*

Dr. Christine Anderson  
[christine.anderson@temple.edu](mailto:christine.anderson@temple.edu)  
215-204-8375

*Chairperson:*

Dr. Paul Rardin  
[rardin@temple.edu](mailto:rardin@temple.edu)  
215-204-4742

## Music Technology MS

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Science in Music Technology.

## About the Program

Over the past several decades, music technology has become a major factor in virtually every area of the music industry. Music technology fuses musical skill and technological knowledge that enables one trained in these areas to create works and/or pursue employment or graduate education in an extremely wide variety of areas. Some of these include music composition, editing and publishing, equipment installation, performance, production, recording and editing, software and hardware development, and systems design, as well as numerous audio fields such as the recording and editing of concerts, events, films and television, and games, among others.

The Master of Science in Music Technology program offers students holding a bachelor's degree in music or its equivalent an opportunity to further advance their experience and understanding of music technology research and practice at the graduate level. Students prepare for professional work, as well as for the possibility of entrance into a doctoral program, through specialized research, creative work and practical experience in the field.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** Accreditation has been granted by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The program offers advanced study in music and music technology whereby students are encouraged to develop

diverse abilities in the field, while allowing them also to focus on an area of expertise of their interest.

**Job Prospects:** Students are prepared for employment in numerous facets of the music industry, higher education teaching in music technology, or pursuit of further graduate education in music and/or technology. The U.S. Bureau of Labor Statistics *Occupational Outlook Handbook* shows continued strong demand for positions in the computer and computer music industry.

**Non-Matriculated Student Policy:** With permission from the Dean's Office, individuals may be granted permission to enter the College as a non-matriculated student, taking up to 9 graduate credits (excluding private lessons) before applying for admission to a program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships, academic internships and tuition scholarships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students) based on departmental needs as well as satisfactory academic and musical progress by the recipient. Tuition scholarships do not carry a work commitment.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 1

Decisions regarding admission are rendered after receipt of all required credentials. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** Entry to the program is contingent on completion of an undergraduate degree in music or its equivalent. Those not holding a bachelor's degree in music who are admitted to the MS degree in Music Technology are assigned additional undergraduate deficiency coursework at the time of admission to bring the student to the level of holding an equivalent degree in music. This coursework is determined based on a thorough review of the undergraduate transcript, pass-off exams in various music subjects upon matriculation, and through Diagnostic Examinations required of all entering students seeking a master's degree. Typically, applicants have an overall undergraduate GPA of at least 3.33 (B+).

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Entrance Exam:** No audition is required for entry to the Music Technology master's program. Admitted students are required to take the master's Diagnostic Examinations in Sound Recording, Sound Editing and Aural Theory prior to the first term of study. See the Program Requirements tab for details.

**Portfolio:** Applicants must demonstrate proficiency in music technology through submission of an entrance portfolio.

**Resume:** Current resume required.

**Writing Sample:** A separate written document explaining the development and creation of the portfolio must be submitted.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 31*

*Required Courses:*

Year 1		Credit Hours
Fall		
MUST 5701	Research in Music	3
or	or Research in Music	
MUST 8701		

MUST 5728	Advanced Audio Production	3
or	or Advanced Audio Production	
MUST 872E		
MUST 5773	Digital Signal Processing for Music	3
or	or Digital Signal Processing for Music	
MUST 8773		
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
MUST 5750	Special Topics in Music Technology	3
or	or Special Topics in Music Technology	
MUST 8750		
Music Technology Elective <sup>1</sup>		3
Elective in Music, Music Studies, or Music Education		3
<b>Credit Hours</b>		<b>9</b>
<b>Year 2</b>		
<b>Fall</b>		
MUST 5760	Special Topics in Music Technology	3
or	or Special Topics in Music Technology	
MUST 8760		
Elective in Music, Music Studies, or Music Education		3
Elective <sup>2</sup>		3
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
MUST 5730	Electronic Music Ensemble	1
or	or Electronic Music Ensemble	
MUST 8730		
MUST 9995	Final Project: Music Technology	3
<b>Credit Hours</b>		<b>4</b>
<b>Total Credit Hours</b>		<b>31</b>

1

Select one of the following: MUST 5706 Live Recording and Mixing for Broadcast (3 s.h.), MUST 5707 Computer Programming for Musicians (3 s.h.), MUST 5724 Printing Musical Scores and Parts (3 s.h.), MUST 5726 Computer Synthesis (3 s.h.), MUST 5732 Programming in Max (3 s.h.), MUST 5733 Music Mixing in Pro Tools (3 s.h.), MUST 5763 Analog and Modular Sound Synthesis (3 s.h.), MUST 5764 Scoring for Film and Digital Media (3 s.h.), MUST 5765 Scoring and Audio Design for Video Games (3 s.h.), MUST 5774 Hearing Music: Acoustics and Psychoacoustics of Music (3 s.h.), MUST 8706 Live Recording and Mixing for Broadcast (3 s.h.), MUST 8707 Computer Programming for Musicians (3 s.h.), MUST 8722 Scoring for Film and Digital Media (3 s.h.), MUST 8724 Printing Musical Scores and Parts (3 s.h.), MUST 8726 Computer Synthesis (3 s.h.), MUST 8727 Electronic Music Composition: Practice, History, Theory (3 s.h.), MUST 8732 Programming in Max (3 s.h.), MUST 8733 Music Mixing in Pro Tools (3 s.h.), MUST 8774 Hearing Music: Acoustics and Psychoacoustics of Music (3 s.h.), MUST 8778 Scoring and Audio Design for Video Games (3 s.h.), or MUST 8783 Analog and Modular Sound Synthesis (3 s.h.).

2

This elective can be selected from among the graduate courses offered in the Boyer College of Music and Dance or any other graduate course available at Temple University.

**Language Examination:** A language examination is not required for the MS in Music Technology.

**Additional Requirements:**

#### *Diagnostic Examinations:*

Prior to the first semester of study in the Music Technology MS program, entering students take a Diagnostic Examination in Aural Theory administered by the Department of Music Studies, as well as a two-part examination in Sound Recording and Sound Editing.

#### A. Graduate Diagnostic Examination in Aural Theory

Students must pass the Aural Theory Diagnostic Examination prior to the first semester of graduate study. Students who fail the exam are required to satisfactorily complete the 3-credit aural theory review course, MUST 5004 Grad Aural Theory Review, with a grade of "P" (i.e., "Pass") during the Spring term. Credits earned in MUST 5004 do not count toward the 31 required graduate credits for the MS degree in Music Technology.

#### B. Graduate Diagnostic Examination in Sound Recording

Music Technology faculty administer the Graduate Diagnostic Examination in Sound Recording. Questions are selected from a test-bank of questions currently used in the final exam for the sound recording course, MUST 4713. These objective, self-graded questions are administered through the Canvas learning management system.

#### C. Graduate Diagnostic Examination in Sound Editing

Music Technology faculty also administer the Graduate Diagnostic Examination in Sound Editing. Questions are selected from a test-bank of audio files currently used in the final exam of the sound editing course, MUST 4714. Using the audio files provided, students are asked to edit and mix a recording session in Pro Tools with careful attention to best practices, including dynamic compression, volume maximization, equalization, clipping and signal routing. Students have 24 hours to complete the exam and must provide a screen capture video approximately 5 minutes in length displaying the Pro Tools session wherein the examinee discusses the choices and techniques utilized throughout the editing and mixing process. Additionally, the examinee is required to submit the complete Pro Tools session with proper asset management.

#### D. Passing the Sound Diagnostic Examinations

Students must pass the Diagnostic Examinations in Sound Recording and Sound Editing prior to the first semester of graduate study. Students who pass both parts of the exam will be permitted to register for MUST 8728 Advanced Audio Production for graduate credit during the first semester of graduate study in the Music Technology MS program.

Students who do not pass one or both parts of the Diagnostic Examinations in Sound Recording and Sound Editing are required to complete the 3-credit course MUST 5006 Sound Recording and Editing Techniques with a grade of "P" (i.e., "Pass") during the first semester of graduate study in the program and prior to being permitted to register for MUST 8728 Advanced Audio Production. MUST 5006 is an intensive semester-long 3-credit course that integrates both sound recording and sound editing topics using Pro Tools software. The course utilizes Linked-In Learning videos available through TUportal, with self-guided learning activities, as well as recording studio and class lecture time. Credits earned in MUST 5006 do not count toward the 31 required graduate credits for the MS degree in Music Technology.

#### E. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examinations in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements (e.g., Spring undergraduate graduation followed by Fall matriculation in the MS program); and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

Further, entering Music Technology MS students may waive taking the Diagnostic Examinations in Sound Recording and Sound Editing. If they so choose, however, they are required to complete MUST 5006 satisfactorily with a grade of "P" (i.e., "Pass") prior to taking MUST 8728 Advanced Audio Production. Credits earned in MUST 5006 do not count toward the 31 required graduate credits for the MS degree in Music Technology.

Also note the following:

- Undergraduate senior music majors who want to apply for the Music Technology MS program may elect to take MUST 5006 during the senior year. MUST 5006 will not, however, count toward the 31 graduate credits required for the graduate program.
- If a Boyer student has already taken MUST 4725 Advanced Audio Production at the undergraduate level with a grade of "B-" or better earned, they may waive this course at the graduate level and replace it with a different 3-credit graduate music technology course.
- Remedial coursework must be completed by the end of the first year of study.

**Culminating Events:** Evidence of student learning is assessed through a combination of course-embedded assessments and projects, written examinations, and a capstone final project presented to the Music Studies Department that demonstrates the application of integrated music technology.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-technology-ms-bc-mute-ms>

### Department Information:

Dept. of Music Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
edward.latham@temple.edu  
215-204-8498

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Graduate Chairperson:*  
Dr. Edward Latham  
edward.latham@temple.edu  
215-204-8498

## Music Theory MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Music Theory.

### About the Program

The Master of Music in Music Theory provides a comprehensive collection of courses designed to develop skills in the areas of music theory research, music analysis and musical composition.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The master's program in Music Theory is organized into a series of small seminars, with an emphasis on developing strong analytical skills and the application of music theory in the academic environment. The program's primary purpose is to prepare majors for further academic studies at the doctoral level.

**Job Prospects:** The program prepares students for various careers related to music and for further academic and musical training at the doctoral level.

**Non-Matriculated Student Policy:** With permission from the Dean's Office, individuals may be granted permission to enter the College as a non-matriculated student, taking up to 9 graduate credits (excluding private lessons) before applying for admission to a program.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 7  
*Spring:* November 1

Decisions regarding admission are rendered after receipt of all required credentials. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Writing Sample:** Applicants must submit with the application for admission an undergraduate-level paper demonstrating their ability to do musical analysis and/or report research. The applicant must submit an assignment of:

- A compositional nature, such as counterpoint, a figured bass, a harmonized melody, an original composition, or the like; and
- An analytical nature, such as a formal analysis, a harmonic analysis, a pitch-class set analysis, or the like.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned

criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 32*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUST 8701	Research in Music	3
MUST 8713	Canon and Fugue	3
MUST 8742	Seminar in Theoretical Analysis (Post-Tonal Music)	3
MUST 8742	Seminar in Theoretical Analysis (Schenkerian Analysis)	3
MUST 8749	Current Topics in Musicology and Theory	3
One course involving Music and Technology		3
<b>Electives</b> <sup>1</sup>		<b>12</b>
<b>Capstone Course</b>		
MUST 9996	Final Written Project: Music Theory (2 terms)	2
<b>Total Credit Hours</b>		<b>32</b>

1

Select from Music, Music Education, Music Studies, and other graduate departments, depending on the research interests of the student. One graduate course in Music History is strongly recommended. Advisor approval required.

**Language Examination:** Students must pass an exam in a foreign language. French and German are strongly recommended, but a different language is possible with approval of the division coordinator. The exam is waived for students who had 2 years of a foreign language as an undergraduate, or for students who reached the final term of a foreign language as an undergraduate.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the

first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Keyboard Examination:*

This exam is scheduled by the student with a member of the Music Theory faculty. Although it can be scheduled at any time, the student is strongly encouraged to complete the exam in the first year of study. Students prepare the following:

1. Score reading of the exposition of the first movement of an 18th-century symphony.
2. A simple lied accompaniment.
3. A Bach chorale.
4. A figured bass.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number

of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Applied Music Study:*

1. Graduate students in non-performing curricula may take up to 6 credits of applied study toward the degree with the permission of the major advisor. Such non-required lessons may be taken only if the student can pass the normal graduate-level performing audition expected of performance majors. In this event, a fee of \$200, not covered by tuition remission, is charged.
2. Regardless of major, graduate students with a demonstrable performing proficiency that may not meet the more rigorous requirements of a graduate-level audition may, by audition, qualify to take 2 credits of applied study per term for graduate credit. These courses carry a fee of \$400 plus tuition and may be applied to the non-performing curriculum for degree credit. Up to 6 credits may be taken with the approval of the major advisor.
3. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson or Recital Extension fees.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

This three-hour written examination includes two lists: one of terms to identify, and the second of music theorists to describe and explain. The examination also requires short essay answers about current theory and an analysis of a work provided. Students should contact the Associate Dean of the Boyer College of Music and Dance in writing at least one month before the scheduled date of the examination. This exam is generally given in the first week of April. Scheduled by Assistant Dean

David Brown, the exam is graded by two members of the department's graduate faculty.

*Final Written Project:*

Music Theory majors write a final written project (MUST 9996 Final Written Project: Music Theory that is 30-40 pages in length. This is not a thesis. Students choose an advisor, who approves the topic of the project in Music Theory. Students are strongly encouraged to begin their final project no later than the beginning of the second year of study and complete the project in their final term of study. The completed final project must be approved by the advisor and a second reader, generally a faculty member in Music Studies.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-theory-mm-bc-mthr-mmus>

### Department Information:

Dept. of Music Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

*Program Coordinator:*

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

*Chairperson:*

Dr. Cynthia Folio  
[cynthia.folio@temple.edu](mailto:cynthia.folio@temple.edu)  
215-204-8316

## Music Therapy MMT

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music Therapy.

### About the Program

The MMT degree program in Music Therapy is designed to provide professional music therapists with advanced clinical training, supported by studies in research, theory and ethics. The curriculum focuses on two areas: Music Medicine and Music Psychotherapy. A broad range of clinical populations, orientations, practices and research paradigms

is presented, and opportunities for self-directed learning are provided through independent study projects. Emphasis is given to integrating professional and personal development through self-experiences in Music Therapy. The program in Music Therapy is led by four world-renowned music therapists.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main, although students may fulfill some credits at TUCC and through online classes

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The degree program is accredited by the National Association of Schools of Music (NASM) and approved by the American Music Therapy Association (AMTA).

**Areas of Specialization:** The MMT in Music Therapy provides two tracks of advanced study, with a variety of course offerings in each track:

- The Music Medicine Track provides didactic and experiential training in how music and the client-therapist relationship are used to facilitate mind-body communication and health.
- The Music Psychotherapy Track provides didactic and experiential training in how music and the client-therapist relationship are used to promote emotional and interpersonal growth.

Coursework is designed to give students in-depth knowledge of creative, receptive, recreative and verbal methods of Music Therapy; the ability to utilize and integrate these methods within medical and psychotherapeutic settings and with a broad range of clientele; the ability to apply theory and research to practice; and an understanding of ethical issues in practice and research. In order to relate theory, research and practice, all courses involve extensive readings along with experiential training in their clinical applications. Additional requirements are a final project and courses on both quantitative and qualitative approaches to research. The experiential components of the program are designed to sensitize students to the effects of their own personality on the client, the music, and the therapy process, while also identifying ethical issues indigenous to music therapy practice. Various theoretical orientations are presented for medical and psychotherapeutic areas of practice.

**Job Prospects:** Graduates typically find employment in a variety of areas, including community mental health agencies, day care facilities, educational institutions, general and psychiatric hospitals, nursing homes, rehabilitation centers, and private practice. Graduates may combine clinical work with research in the above areas of practice. The program also provides preparation for doctoral study in Music Therapy and related disciplines.

**Licensure/Certification:** Board Certification as a Music Therapist demonstrates that you have completed comprehensive competency testing based on your education and clinical training and that you have met an objective standard that ensures you are prepared to practice music therapy. Certification is required to practice as a music therapist in the following states: California, Connecticut, Georgia, Nevada, New Jersey, New York, North Dakota, Oklahoma, Oregon, Rhode Island, Utah, Virginia, and Wisconsin. The Certification Board of Music Therapists administers an examination that students must pass in order to become certified. Temple University's Master of Music in Music Therapy program, accredited by the American Music Therapy Association (AMTA), meets the educational requirements to sit for the certification examination. Students must also complete a clinical internship following



graduation before sitting for the certification examination. For more information, visit <https://www.cbmt.org/state-requirements/>.

**Non-Matriculated Student Policy:** Professionals who wish to enroll in specific courses for continuing education may take courses with departmental approval. The Graduate School permits up to 9 credits of graduate coursework taken at Temple University as a non-matriculated student to be applied to a graduate degree.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance, and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 1

Applications are processed as they arrive up to the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** Three admission options are open to those seeking the MMT degree:

1. Master of Music Therapy, which is the option available to an applicant who has completed a bachelor's degree in Music Therapy and is certified to practice Music Therapy. Applicants for the MMT degree are expected to demonstrate the musicianship, self-awareness and interpersonal skills needed for in-depth clinical work.
2. Music Therapy/Combined Master's Equivalency Program, which is the option available to an applicant who has a bachelor's degree in Music, but is not certified in Music Therapy and must complete Music Therapy core courses. This program integrates core courses in Music Therapy required for entry-level certification with the master's program.
3. Bachelor of Music in Music Therapy, which is the option available to an applicant who holds an undergraduate degree outside of Music or who does not have at least 60 undergraduate credits in Music or its equivalent. The bachelor's degree must be earned prior to applying for the MMT.

In addition, the Master of Music Therapy – Licensed Professional Counselor (LPC) Program is available to both MMT students and Master's Equivalency students who want to complete the additional

coursework needed to satisfy the Pennsylvania requirements for licensure.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Music Therapy, Music Education, Music History, Music Performance, or Music Theory is required.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Audition:** Applicants must submit a video-recorded audition consisting of two pieces in different styles in the applicant's major performance medium (with accompanist when needed) and three standard or popular songs sung and played by the applicant on piano and/or guitar from American children, geriatric, adult or adolescent repertoire. See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and download and complete a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36 for the MMT; 63 for the Music Therapy/Combined Master's Equivalency Program; 12 to add the Licensed Professional Counselor option

*Required Courses:*

## Master of Music Therapy

Code	Title	Credit Hours
<b>Core Courses</b>		
MUED 8601	Qualitative Research in Music Therapy	3
MUED 8602	Quantitative Research in Music Therapy	3
MUED 8603	Theories of Music Psychotherapy	2
MUED 8615	Adv Mus Thrpy Clin Trng	1
MUED 8617	Multicultural Music Therapy	2
MUED 8618	Music in Medicine	2
MUED 8621	Music Therapy Ethics	2
MUED 8626	Models of Clinical Supervision in Music Therapy	2
MUED 9687	Advanced Music Therapy Practicum	1
<b>Electives <sup>1</sup></b>		<b>15</b>
Recommended courses include:		
MUED 8611	Music Therapy Research	
MUED 8612	Music Therapy Foundation	
MUED 9660	Advanced Topics in Music Psychotherapy	
MUED 9670	Advanced Topics in Music Medicine	
MUED 9680	Music Therapy: Special Topics	
<b>Capstone Course</b>		
MUED 9995	Master's Final Project	3
<b>Total Credit Hours</b>		<b>36</b>

1

Select from Music, Music Education, Music Studies, Music Therapy, and other graduate departments. Advisor approval required.

## Music Therapy/Combined Master's Equivalency Program

Code	Title	Credit Hours
<b>Core Courses</b>		
MUED 3689	Fieldwork in Music Therapy	2
MUED 3789	Fieldwork in Music Therapy II	2
MUED 3889	Fieldwork in Music Therapy III	2
MUED 4611	Music Therapy Overview	3
MUED 4614	Psychiatric Music Therapy	3
MUED 4616	Developmental Music Therapy	3
MUED 4619	Medical/Rehabilitative Music Therapy	3
MUED 4641	Music Therapy Experiences I: Creative Methods	1
MUED 4642	Music Therapy Experiences II: Recreative Methods	1
MUED 4643	Music Therapy Experiences III: Receptive Methods	1
MUED 4685	Music Therapy Clinical Internship	6
MUED 8601	Qualitative Research in Music Therapy	3
MUED 8602	Quantitative Research in Music Therapy	3
MUED 8603	Theories of Music Psychotherapy	2
MUED 8615	Adv Mus Thrpy Clin Trng	1
MUED 8617	Multicultural Music Therapy	2
MUED 8618	Music in Medicine	2
MUED 8621	Music Therapy Ethics	2
MUED 8626	Models of Clinical Supervision in Music Therapy	2

MUED 9687	Advanced Music Therapy Practicum	1
<b>Electives <sup>1</sup></b>		<b>15</b>

Recommended courses include:

MUED 8611	Music Therapy Research	
MUED 8612	Music Therapy Foundation	
MUED 9660	Advanced Topics in Music Psychotherapy	
MUED 9670	Advanced Topics in Music Medicine	
MUED 9680	Music Therapy: Special Topics	

### Capstone Course

MUED 9995	Master's Final Project	3
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**Total Credit Hours** **63**

1

Select from Music, Music Education, Music Studies, Music Therapy, and other graduate departments. Advisor approval required.

## Master of Music Therapy - Licensed Professional Counselor Program

Code	Title	Credit Hours
CPSY 5519	Group Counseling	3
CPSY 5593	Career Counseling and Development	3
CPSY 5694	Introduction to Assessment	3
EPSY 5541	Concepts in Human Development	3
<b>Total Credit Hours</b>		<b>12</b>

### Additional Requirements:

#### Diagnostic Examination:

The Diagnostic Examination in Voice, Piano, and Guitar is required for all students entering the master's degree program in Music Therapy. The examination covers two broad areas of competence:

1. the ability to sing and play a large repertoire of songs from the standard, popular, traditional, folk, rock or country literature; and
2. the ability to sight-sing and sight-harmonize songs from a fake book.

For the examination, students bring a list of at least 12 songs that they are prepared to sing and play. The examiners then select one or more songs to be sung and played on the piano, and one or more to be sung and played on the guitar. In the next portion of the examination, students are asked to sight-sing and sight-harmonize tunes from a fake book, using piano and guitar as accompaniments.

Any student who has not studied voice, piano and/or guitar, or who is not prepared to play popular music or use a fake book, may waive any or all portions of the examination and opt to take the appropriate remedial course(s). This is not unusual. Most students entering the program need instruction or practice in one or more of these areas. Therefore, students are encouraged to view this as merely a placement examination. Depending on each student's background and competence, as demonstrated on the examination, students may be placed in the following remedial courses for 1 credit each:

Code	Title	Credit Hours
MUED 1658	Guitar I	1
MUED 1659	Guitar II	1
MUED 3631	Functional Voice I	1

MUED 3632	Functional Voice II	1
MUED 3633	Functional Piano I	1
MUED 3634	Functional Piano II	1
MUED 3635	Functional Guitar I	1
MUED 3636	Functional Guitar II	1
MUSC 1211	Voice Class	1
MUSC 1212	Voice Class	1
MUST 2105	Jazz Secondary Piano	1
MUST 2106	Jazz Secondary Piano	1
MUST 3105	Jazz Class Piano	1
MUST 3106	Jazz Class Piano	1

Credits earned in required remedial courses do not apply toward the master's degree.

**NOTE:** All students must present themselves for the Diagnostic Examination at the designated time. Students who wish to waive any portion of the examination by taking the remedial courses are still required to present themselves for the scheduled Diagnostic Examination, unless they send written notification to the Music Therapy faculty stating their intent to waive all portions of the exam. When students waive all portions of the exam, they are required to take all remedial coursework without any further opportunity for taking or retaking the examination.

*Clinical Experience:*

Ongoing clinical experience is required.

*Tuition and Fee Payments:*

All tuition and fees must be paid according to the deadlines given by the Bursar's Office at the time of registration. This means that all payments must be received prior to the first day of the term in which the course is offered—not prior to the first day of the course, which in Music Therapy may be very late in the term. When payments are not received by the University deadlines for each term, registrations are automatically canceled, and late fees are imposed for reregistering. Often students do not receive written notification of this until well into the term. Students are encouraged to be punctual in meeting all registration deadlines, as failure to do so is very costly in time, effort and money.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic

and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Applied Music Study:*

1. Graduate students in non-performing curricula may take up to 6 credits of applied study toward the degree with the permission of the major advisor. Such non-required lessons may be taken only if the student can pass the normal graduate-level performing audition expected of performance majors. In this event, a fee of \$200, not covered by tuition remission, is charged.
2. Regardless of major, graduate students with a demonstrable performing proficiency that may not meet the more rigorous requirements of a graduate-level audition may, by audition, qualify to take 2 credits of applied study per term for graduate credit. These courses carry a fee of \$400 plus tuition and may be applied to the non-performing curriculum for degree credit. Up to 6 credits may be taken with the approval of the major advisor.
3. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson or Recital Extension fees.

*Incompletes:*

All incomplete grades must be fulfilled within one year.

**Culminating Events:**

*Comprehensive Examination:*

Upon completion of the final projects and with permission of the Program Coordinator, the student may request permission to take the written qualifying examination. Students should contact the Program Coordinator regarding administration dates of the comprehensive examination.

The written qualifying examination in Music Therapy does not limit its scope to the coursework taken at Boyer College of Music and Dance. Instead, the student is expected to study comprehensively in preparation for this examination. The written qualifying examination in Music Therapy covers:

1. Basic methods and techniques of Music Therapy.
2. Principles of assessment and evaluation.
3. Various client populations.
4. Various theoretical approaches to individual and group therapy.
5. Existing research literature and research approaches.
6. Professional ethics.

*Final Project:*

As part of the Music Therapy curriculum, students undertake a final project that encompasses a pilot research study.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-therapy-mmt-bc-mthe-mmt>

### Department Information:

Dept. of Music Education and Therapy  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
darlene.brooks@temple.edu  
215-204-8301

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

#### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

#### Program Coordinator:

Dr. Darlene M. Brooks  
darlene.brooks@temple.edu  
215-204-8301

#### Chairperson:

Dr. Rollo Dilworth  
radclef@temple.edu  
215-204-8317

## Music Therapy PhD

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Doctor of Philosophy in Music Therapy.

### About the Program

The PhD program at Temple University is a true PhD in Music Therapy. Rather than having music therapy as a minor or elective track within another field, or as merely the main topic for the dissertation, the program has Music Therapy as the major area of study with its own core curriculum of advanced Music Therapy courses, supported by studies in research, music and related health disciplines. The goal is to prepare skilled and experienced clinicians to become competent scholars who make significant contributions to research and theory in the field by:

- preparing individuals to conduct research and develop theory, with opportunities to study both quantitative and qualitative research paradigms; and
- providing for the development of expertise and skill in college-teaching and clinical supervision.

The program has undergone extensive review and has been granted plan approval by the National Association of Schools of Music (NASM). It is

the first of its kind in the United States. The program in Music Therapy is led by four world-renowned music therapists.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main, Center City

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** The program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The PhD program in Music Therapy offers the opportunity for further development of clinical expertise in two advanced areas of practice: Music Medicine and Music Psychotherapy. The program allows for the acquisition of expertise in an area of specialization within the two areas of practice (e.g., a particular client population, methodology, or research paradigm).

**Job Prospects:** Graduates typically find employment as professors in colleges and universities, and as practitioners, supervisors or researchers in a variety of healthcare settings.

**Licensure/Certification:** Students may opt to take additional coursework that may meet licensure requirements in one or more states.

**Non-Matriculated Student Policy:** The core doctoral courses are not open to non-matriculated students.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 1

Applications are processed as they arrive up to the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from academic advisors, professors, or professional supervisors who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** Applicants who have not completed the following courses before matriculation must complete them while a doctoral student:

Code	Title	Credit Hours
MUED 8601	Qualitative Research in Music Therapy	3
MUED 8602	Quantitative Research in Music Therapy	3
MUED 8603	Theories of Music Psychotherapy	2
MUED 8618	Music in Medicine	2
MUED 8619	Music Therapy Education and Training	2
MUED 8621	Music Therapy Ethics	2
MUED 9995	Master's Final Project	1-3

**Master's Degree in Related Discipline:** A master's degree in Music, Music Education, Music Therapy, Creative Arts Therapy, Health Studies, or Psychology is required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in any music-related field is required.

**Statement of Goals:** Share your professional goals, which must be clearly articulated, feasible, relevant to the needs of the profession, and appropriate to the program at Temple.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Prescreening Video and Audition:** Applicants submit a prescreening video via Acceptd. This recording may contain representative movements of the audition material, with the majority of the material having been recorded within the last 12 months. Video recordings of accompanied works must have piano or orchestral accompaniment.

If preliminary approval is granted, an in-person live audition is arranged. Audition repertoire requirements include:

- Two major works in a major performance medium.
- Two standard or popular songs sung with own piano accompaniment.
- Two standard or popular songs sung with own guitar accompaniment.
- Sight-sing and sight-harmonize tunes from a fake book, using both piano and guitar for accompaniment, and sight-read simple piano pieces.

Note that video recordings alone are not acceptable for admission, except in the case of students living outside the United States. In this case, applicants must submit a video recording of complete works.

**Resume:** Current resume required.

**Interview:** After all application materials have been received, an interview is scheduled with the applicant by the Program Coordinator. (Please allow at least three weeks after submission.) The interview may occur at the time of the in-person audition or may be scheduled after the applicant submits a recorded audition.

**Writing Sample:** A clinical, theoretical or research paper in Music Therapy must be uploaded to Acceptd.

**Writing Examination:** An on-site Writing Examination is required as part of the doctoral admissions process. Remedial coursework may be required.

**Test Waiver:** A completed MMT degree from Temple may warrant a waiver.

**Advanced Standing:** Advanced standing is awarded upon admission, after review of transcripts by the Doctoral Coordinator. Students may transfer into the doctoral program up to 12 additional graduate credits in coursework taken beyond the master's degree. Typically, this coursework is undertaken after admission and must be approved by the major advisor and the Associate Dean. The maximum number of advanced standing credits awarded is 36.

**Additional Requirements:** The successful applicant must:

1. Hold professional certification in Music Therapy.
2. Have at least five years of full-time clinical experience as a professional music therapist (or its equivalent).
3. Have earned a master's degree in Music Therapy or related area or satisfactorily completed 18 graduate credits in Music.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Master's: 44*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUED 8622	Res Mus Psychotherapy	3
MUED 8624	Research in Music Medicine	3
MUED 9611	Theory Development in Music Therapy	3
MUED 9641	Music Therapy Doctoral Seminar	3
<b>Electives <sup>1</sup></b>		
Music, Music Therapy, and/or Non-Music Courses		14
Research, including 6 credits in Statistics		12
<b>Research Course</b>		
MUED 9999	Doctoral Dissertation	6
<b>Total Credit Hours</b>		<b>44</b>

1

Advisor approval required.

**Additional Requirements:**

*Grading:*

For doctoral degrees, only grades of "B-" and higher may be counted toward degree requirements.

*Tuition and Fee Payments:*

All tuition and fees must be paid according to the deadlines given by the Bursar's Office at the time of registration. This means that all payments must be received prior to the first day of the term in which the course is offered—not prior to the first day of the course, which in Music Therapy may be very late in the term. When payments are not received by the University deadlines for each term, registrations are automatically canceled, and late fees are imposed for reregistering. Often students do not receive written notification of this until well into the term. Students are encouraged to be punctual in meeting all registration deadlines, as failure to do so is very costly in time, effort and money.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Applied Music Study:*

1. Graduate students in non-performing curricula may take up to 6 credits of applied study toward the degree with the permission of the major advisor. Such non-required lessons may be taken only if the student can pass the normal graduate-level performing audition expected of performance majors. In this event, a fee of \$200, not covered by tuition remission, is charged.
2. Regardless of major, graduate students with a demonstrable performing proficiency that may not meet the more rigorous requirements of a graduate-level audition may, by audition, qualify to take 2 credits of applied study per term for graduate credit. These courses carry a fee of \$400 plus tuition and may be applied to the non-performing curriculum for degree credit. Up to 6 credits may be taken with the approval of the major advisor.
3. Graduate assistantships and other forms of University-sponsored financial aid do not cover private lesson or Recital Extension fees.

*Incompletes:*

All incomplete grades must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Preliminary Examination:*

The preliminary examination is designed to test the student's knowledge of the literature; research competence in both quantitative and qualitative paradigms; ability to integrate theory, research and practice; ability to contextualize one's own work within the field; ability to project solutions to disciplinary and professional issues; and ability to synthesize and evaluate one's own learning. It has two components: scholarly projects and the oral defense.

1. Scholarly projects originate from specific assignments given in required doctoral courses and, depending on the project, may be completed with additional faculty supervision through other elective courses (e.g., research apprenticeship). Ultimately, the project must go significantly beyond any course assignment, and it may not duplicate any previous projects completed by the student outside of the degree program. At least three Music Therapy faculty independently grade each preliminary examination project using a 5-point rating scale. A passing average grade for each question is 3.
2. The oral defense covers any of the topics addressed in the written projects. The oral examiners are the same Music Therapy faculty members who scored the scholarly projects. Upon completion of the oral defense, the examining committee determines whether the student passed or failed. If any portion is failed, the committee specifies in writing whether permission is granted to retake various portions of the examination, and the conditions under which such permission is granted. Students are given only one opportunity to retake the examination or portion thereof. Students should contact the Doctoral Coordinator of the Music Therapy PhD program for more details regarding the nature of the examination questions.

Upon completion of 30 credits, the student requests permission from the Doctoral Coordinator to take the examination. Upon consultation with the Music Therapy faculty, the Doctoral Coordinator schedules the exam. The oral part can be scheduled three weeks after the student submits the written part.

*Proposal:*

The proposal must include the student's background and experience with the research topic; an articulate and comprehensive review of the literature; a clear statement of the research problem and questions to be answered; and a proposed methodology. Upon approval of a Doctoral Advisory Committee, the student works with the major advisor to prepare the proposal. In the process, the student consults other members of the committee. Each member of the Doctoral Advisory Committee must approve and sign the final proposal. Once all members have signed the title page, the student copies the final proposal and delivers within 30 days one copy to each member of the Doctoral Advisory Committee, the department chair, the Associate Dean, and the Graduate School. The dissertation proposal must be approved before the student may register for MUED 9999 Doctoral Dissertation.

*Dissertation:*

The purpose of the dissertation is to contribute new knowledge or insight to any aspect of Music Therapy. The dissertation is overseen by the Doctoral Advisory Committee, which consists of at least three members, two from the department and one from outside the department. The committee works together to guide the student toward completion of dissertation research, with the chair coordinating these efforts. In addition to the Doctoral Advisory Committee, one or two graduate faculty may serve as examiners for the defense. These examiners are expected to read and evaluate the student's dissertation and, with the Doctoral Advisory Committee, determine whether it is acceptable, needs revision,

or is unacceptable. The dissertation must meet the various expectations of quality from each member of the Doctoral Advisory Committee. A major criterion shall be whether the student has demonstrated scholastic excellence in carrying out the research project as proposed.

The Doctoral Advisory Committee determines when the dissertation is ready for defense. Upon obtaining approval to defend, the major advisor asks the Associate Dean to assign outside readers. The advisor makes all the necessary arrangements for scheduling the defense. The "Announcement of Oral Defense" form bearing signatures of all of the Dissertation Examining Committee members must be submitted to the Associate Dean at least one month prior to the requested defense date. Upon receiving approval to defend, the Associate Dean announces the dissertation defense to the academic community.

To make a change in a committee, the student petitions the Doctoral Coordinator of the program or the Associate Dean. Upon appropriate consultation with all parties pertinent to the petition, the Associate Dean makes the final determination. The change also must be communicated to the Graduate School.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-therapy-phd-bc-mthe-phd>

### Department Information:

Dept. of Music Education and Therapy  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
darlene.brooks@temple.edu  
215-204-8301

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Dr. Darlene M. Brooks  
darlene.brooks@temple.edu  
215-204-8301

*Chairperson:*  
Dr. Rollo Dilworth  
radclef@temple.edu  
215-204-8317

## Opera MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Opera.

## About the Program

The Master of Music in Opera is designed to prepare qualified performers for professional careers as singer-actors on both national and international operatic stages. The faculty only admits singers who demonstrate outstanding potential for the operatic stage, both vocally and dramatically, and strives to provide as thorough a graduate training as possible within a two-year framework. The ultimate goal is to produce singing artists capable of competing successfully in the professional world of opera.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** With the approval of the major advisor, students may elect to take up to 6 graduate credits outside the field of music.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The program prepares students through a systematic approach to vocal technique, specialized studies in operatic literature, the refinement of language and diction skills, the development of acting techniques, the continued refinement of musical and theoretical skills, advanced study in musical style and performance practice, and the provision of operatic performance opportunities designed to emulate a professional environment.

**Job Prospects:** Graduates work throughout the world performing in opera houses, singing as soloists, and teaching in colleges and universities as well as in private studios.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in selected courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* February 1; December 15 international

*Spring:* September 15; August 1 international

Applications are processed as they arrive up to the deadline date.

APPLY ONLINE to this graduate program.

**Letters of Reference:**

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into an applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 32

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8213	Opera Diction	2
MUSC 8216	Aria Repertoire	2
MUSC 8220	Opera Workshop (4 terms)	8
MUSC 8234	Opera Major	2
MUSC 8244	Opera Major	2
MUSC 8254	Opera Major	2
MUSC 8264	Opera Major	2
MUSC 8274	Opera Role Performance	1
MUST 8701	Research in Music	3
MUST 8708	History of Opera	2
MUST 8709	History of Opera	2
<b>Electives <sup>1</sup></b>		<b>4</b>
<b>Total Credit Hours</b>		<b>32</b>

<sup>1</sup>

A maximum of one term of vocal coaching may be taken.

**Language Examination:** Candidates in Opera must present undergraduate coursework in French, German and Italian languages (or pass a translating and speaking examination at Temple) at the time of admission to the program. Where the transcript or pass-off examination does not reveal such study, the appropriate deficiency course(s) must be taken prior to completion of the master's degree.

**Additional Requirements:**

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:



1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Piano Proficiency:*

In addition to the written Diagnostic Examinations required upon entrance to the program, Opera majors take a functional piano examination encompassing the following points:

1. playing a prepared accompaniment (music can be used);
2. sight-reading a simple accompaniment; and
3. improvising an accompaniment to a simple melody.

Remedial coursework may be required.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of academic terms. Students must arrange their schedules to accommodate this requirement.
2. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

#### **Culminating Events:**

##### *Comprehensive Examination:*

The Voice and Opera program requires a one-hour comprehensive examination in music literature and theory. When admitted to the College, a list of 100 musical works of the standard literature from the Middle Ages through the 20th century is made available to the student as an aid to prepare for the examination. This examination should be taken in the penultimate term of study.

The examination is in three parts: identification of specific selections from a list of 100 works, identification of a "mystery" selection, and

score analysis. Two graduate faculty members grade the examination. Students must pass all three sections. A score of 70% or better must be achieved in the identification section, and a "Pass" or "Weak Pass" must be achieved in the "mystery" selection and the score analysis section.

The examination is administered approximately ten times each year. Students notify the Assistant Dean no later than one week prior to the requested examination administration date. For examination dates, see the Graduate Music Examination Schedule.

*Adjudicated Roles:*

Opera majors must have accumulated at least two major adjudicated roles or one major and two minor adjudicated roles in addition to opera theater assignments. Fully-staged opera productions with orchestra are typically presented each term. Opera roles are adjudicated by three full-time music faculty members.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/opera-mm-bc-oprammus>

### Department Information:

Dept. of Vocal Arts  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[christine.anderson@temple.edu](mailto:christine.anderson@temple.edu)  
215-204-8375

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

*Program Coordinator:*

Dr. Christine Anderson  
[christine.anderson@temple.edu](mailto:christine.anderson@temple.edu)  
215-204-8375

*Chairperson:*

Dr. Paul Rardin  
[rardin@temple.edu](mailto:rardin@temple.edu)  
215-204-4742

## Piano Pedagogy MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Piano Pedagogy.

## About the Program

The master's degree in Piano Pedagogy expands the resources, skills and insights of pianists who wish to be teachers, either in a private studio or at an institution, and who—in addition to having a comprehensive knowledge about teaching children and adults at an elementary level—are equipped to teach intermediate and early advanced students.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** While private lessons and ensemble participation are required each term, a major concentration of the curriculum is the study and practice of the teaching of the piano. Included in this concentration are coursework and fieldwork through the College's preparatory division.

**Job Prospects:** The program prepares musicians for teaching careers, professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in selected courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate

Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8004	Piano Major Concentration in Pedagogy	2
MUSC 8014	Piano Major Concentration in Pedagogy	2
MUSC 8024	Piano Major Concentration in Pedagogy	2
MUSC 8461	Piano Pedagogy I	2

MUSC 8462	Class Piano Pedagogy	2
MUSC 8463	Class Piano Practice Teaching II	2
MUSC 8477	Baroque Keyboard Performance Practice	3
MUSC 8478	Classical Keyboard Performance Practice	3
MUST 8701	Research in Music	3
<b>Electives</b> <sup>1</sup>		<b>6</b>
<b>Public Recital</b>		
MUSC 8084	Piano Major Concentration in Pedagogy (Recital)	3
<b>Total Credit Hours</b>		<b>30</b>

1

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

#### Additional Requirements:

##### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. **Touring:** All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of academic terms. Students must arrange their schedules to accommodate this requirement.
2. **Participation:** Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. **Non-Credit Participation:** With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this

type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

#### *Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. **Recital Extension Fees:** Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. **Exceptions to Recital Extension:**
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. **Failure to Present Recital:** The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

#### *Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

### **Culminating Events:**

#### *Comprehensive Final Project:*

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final recital program. (Students enrolled in programs without a recital requirement, such as Opera Coaching, choose two contrasting works studied with their assigned studio teacher.) Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations
- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 20 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 10 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for a May graduation or November 15 for a January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.

Each reader grades the project as either pass or fail. Any student who fails is not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and graded as before. Students who fail a second time are dismissed from the degree program.

#### *Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8084). Graduation recitals are typically one hour in length; presented on campus in either Rock Hall or Klein Recital Hall; and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding

Summer months. A recital approval jury must be formed to demonstrate the student's ability to perform the degree recital successfully. Normally, this occurs at the preceding term's jury. If, by departmental approval, this jury does not occur, then a jury must be scheduled at least four weeks prior to the recital. If the jury is not successfully completed by that time, the department reserves the right to cancel the recital date. Further details are available from the department chair.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/piano-pedagogy-mm-bc-pped-mmus>

### **Department Information:**

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-7388

### **Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

### **Department Contacts:**

#### *Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

#### *Program Coordinator:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

#### *Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

## **Piano Performance and Music Theory MM**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Piano Performance and Music Theory.

### **About the Program**

Guided by the philosophy that the development of both performance and theoretical skills is vital for students, the Department of Keyboard Studies in the Boyer College of Music and Dance developed a master's degree that combines significant performance and theoretical components. A historical connection exists between the two fields that continues to this day.

The goal of the Piano Performance and Music Theory MM degree program is to prepare graduates with music theory knowledge that makes them well-rounded practical musicians who are able to apply skills and knowledge to performance. Students acquire additional valuable skills and credentials for use in the field.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on both piano performance and music theory, with additional coursework that supports advanced development in both areas.

In Piano Performance, students study privately with professional artist-teachers and enjoy opportunities for performance in solo recitals and large/small chamber music ensembles. Piano Performance studies culminate in an adjudicated solo recital.

In Music Theory, students engage the field's current analytical trends and applications. The theory portion of this program is organized into a series of small seminars. Through discussion and research, strong analytical skills and advanced tools are developed for use in both performance and academic environments. Theory studies culminate in a comprehensive examination and a written project.

**Job Prospects:** The program prepares graduates to pursue substantive professional activities in both performing and academic venues.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in selected courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 44

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8404	Piano Major	3
MUSC 8414	Piano Major	3
MUSC 8424	Piano Major	3
MUSC 8461	Piano Pedagogy I	2
MUSC 8465	Piano Pedagogy II	2
MUSC 8477	Baroque Keyboard Performance Practice	3
MUSC 8478	Classical Keyboard Performance Practice	3
MUSC 8510	Instrumental Ensemble (2 terms)	2
MUST 8701	Research in Music	3
MUST 8713	Canon and Fugue	3
MUST 8738	Schenkerian Analysis 1	3
MUST 8748	Seminar in Post-Tonal Theory	3
MUST 8749	Current Topics in Musicology and Theory	3
<b>Music Technology Elective</b>		<b>3</b>
<b>Culminating Courses</b>		
MUSC 8484	Piano Major-Recital	3
MUST 9996	Final Written Project: Music Theory (2 terms)	2
<b>Total Credit Hours</b>		<b>44</b>

**Additional Requirements:***Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

**A. Graduate Diagnostic Examination in Aural Theory**

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

**B. Graduate Diagnostic Examination in Written Theory**

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

**C. Graduate Diagnostic Examination in Music History**

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

**D. Conditions for Exemption from Diagnostic Examinations**

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior

permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Final Project:*

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final recital program. (Students enrolled in programs without a recital requirement, such as Opera Coaching, choose two contrasting works studied with their assigned studio teacher.) Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations
- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 30 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 20 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for May graduation or November 15 for January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.

Each reader grades the project as either pass or fail. Any student who fails is not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and



graded as before. Students who fail a second time are dismissed from the degree program.

*Public Recital:*

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8484). Graduation recitals are typically one hour in length, presented on campus in either Rock Hall or Klein Recital Hall, and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A recital approval jury must be held to demonstrate the student's ability to perform the degree recital successfully. Normally, this occurs at the preceding term's jury. If, by departmental approval, this jury does not occur, then a jury must be scheduled at least four weeks prior to the recital. If the jury is not successfully completed by that time, the department reserves the right to cancel the recital date. Further details are available from the department chair.

*Comprehensive Examination:*

This three-hour written examination includes two lists: one of terms to identify, and the second of music theorists to describe and explain. The examination also requires short essay answers about current theory and an analysis of a work provided. Students should contact the Associate Dean of the Boyer College of Music and Dance in writing at least one month before the scheduled date of the examination. This exam is generally given in the first week of April. The exam is graded by two graduate faculty members.

*Final Written Project:*

A final written project (MUST 9996) that is 30-40 pages in length is required for completion of the degree. This is not a thesis. Students choose an advisor, who approves the topic of the project in Music Theory. Students are strongly encouraged to begin their final project no later than the beginning of the second year of study and complete the project in their final term of study. The completed final project must be approved by the advisor and a second reader, generally a faculty member in Music Studies.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/piano-performance-and-music-theory-mm-bc-ppmt-mmus>

### Department Information:

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-7388

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

*Chairperson:*

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

## Piano Performance/Collaborative Piano and Chamber Music MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Piano Performance/Collaborative Piano and Chamber Music.

### About the Program

Guided by the philosophy that the development of diverse performance skills is vital for musicians, the Department of Keyboard Studies in the Boyer College of Music and Dance developed a master's degree that combines performance with collaborative and accompaniment studies. The goal of the Piano Performance/Collaborative Piano and Chamber Music MM degree program is to prepare graduates who are more commercially viable and competitive in the field.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music. Students are also trained to:

- listen to the many events occurring simultaneously in ensembles;
- learn how to conduct rehearsals;
- appreciate how text can affect musical performance;
- distinguish between the many different kinds of ensemble participation depending on the media; and
- develop their pianistic skills in order to meet the demands of advanced chamber and accompanied works.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** For the Piano Performance/Collaborative Piano and Chamber Music MM, the pianist should supply the instrumentalist(s) for their recorded audition. Two fast movements and two slow movements are to be performed from two of the following works:

- Beethoven Sonata for Piano and Violin in F, Op. 24
- Brahms Sonata for Piano and Cello in E Minor, Op. 38
- Debussy Sonata for Cello and Piano
- Mozart Sonata for Piano and Violin in B-flat, K. 454
- Two substantial solo works that demonstrate proficiency at a graduate (i.e., memorized) level, preferably one work from the 20<sup>th</sup>/21<sup>st</sup> centuries

A sight-reading exam is required. The Department of Keyboard Studies arranges a time with applicants to conduct the exam.

For more information about audition repertoire requirements, see <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp>.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 48*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8404	Piano Major	3
MUSC 8414	Piano Major	3
MUSC 8416	Piano for Accompanying and Chamber Music Majors	2
MUSC 8419	Piano for Accompanying and Chamber Music Majors	2
MUSC 8424	Piano Major	3
MUSC 8443	Listening/Learning Skills: Piano I	3
MUSC 8461	Piano Pedagogy I	2
MUSC 8465	Piano Pedagogy II	2
MUSC 8471	Recital Accompanying	1

MUSC 8472	Recital Accompanying	1
MUSC 8473	Recital Accompanying	1
MUSC 8474	Recital Accompanying	1
MUSC 8475	Studio Accompanying (2 terms)	2
MUSC 8477	Baroque Keyboard Performance Practice	3
MUSC 8478	Classical Keyboard Performance Practice	3
MUSC 8500	Instrumental Ensemble <sup>1</sup>	1
MUSC 8510	Instrumental Ensemble (3 terms) <sup>1</sup>	3
MUST 8701	Research in Music	3
MUST 8741	Analytical Techniques	3
<b>Electives</b> <sup>2</sup>		<b>3</b>
<b>Public Recital</b>		
MUSC 8484	Piano Major-Recital	3
<b>Total Credit Hours</b>		<b>48</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

#### Additional Requirements:

##### Diagnostic Examinations:

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### Professional Development Policy:

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### Performing Ensembles:

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior

permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per academic term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Recital Extension:*

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.

3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:**

*Comprehensive Final Project:*

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) and collaborative teacher while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final solo recital program and two contrasting works from their collaborative repertoire. Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations
- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 30 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 20 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for May graduation or November 15 for January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.

Each reader grades the project as either pass or fail. Any student who fails is not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and graded as before. Students who fail a second time are dismissed from the degree program.

**Public Recital:**

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8484). Graduation recitals are typically one hour in length, presented on campus in either Rock Hall or Klein Recital Hall, and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A recital approval jury must be formed to demonstrate the student's ability to perform the degree recital successfully. Normally, this occurs at the preceding term's jury. If, by departmental approval, this jury does not occur, then a jury must be scheduled at least four weeks prior to the recital. If the jury is not successfully completed by that time, the department reserves the right to cancel the recital date. Further details are available from the department chair.

**Recital Accompaniment:**

Students must accompany one student recital in the first term and two full senior or master's recitals in each of three succeeding academic terms. In addition, performance of a full chamber music work is required each of the four terms. Graduation recitals are typically one hour in length, presented on campus in either Rock Hall or Klein Recital Hall, and adjudicated by three full-time music faculty members.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/piano-performance-collaborative-piano-and-chamber-music-mm-bc-pppm-mmus>

**Department Information:**

Dept. of Keyboard Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[charles.abramovic@temple.edu](mailto:charles.abramovic@temple.edu)  
215-204-7388

**Submission Address for Application Materials:**

<https://apply.temple.edu/Boyer/>

**Department Contacts:****Admissions:**

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

**Program Coordinator:**

Dr. Charles Abramovic  
[charles.abramovic@temple.edu](mailto:charles.abramovic@temple.edu)  
215-204-7388

**Chairperson:**

Dr. Charles Abramovic  
[charles.abramovic@temple.edu](mailto:charles.abramovic@temple.edu)

215-204-7388

**Piano Performance/Piano Pedagogy MM**

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Piano Performance/Piano Pedagogy.

**About the Program**

Guided by the philosophy that the development of both performance and pedagogical skills is vital for students, the Department of Keyboard Studies in the Boyer College of Music and Dance developed a master's degree that combines significant performance and pedagogical components. The goal of the Piano Performance/Piano Pedagogy MM degree program is to prepare graduates who are more commercially viable and competitive in the field as musicians and teachers by acquiring valuable skills and credentials. Given that studio teaching and, occasionally, group instruction can and often do constitute significant portions of a keyboardist's workload, this degree should be viewed as a highly attractive educational investment that provides evidence of competence.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** Study focuses on performance of the major instrument, the solo and ensemble literature of the instrument, and academic support areas in music. While private lessons and ensemble participation are required each term, a major concentration of the curriculum is the study and practice of the teaching of the piano.

**Job Prospects:** The program prepares musicians for teaching careers, professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in selected courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1

Spring: November 1

Applications are processed as they arrive. Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

### Letters of Reference:

Number Required: 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** For the Piano Performance/Piano Pedagogy MM, all works are to be performed from memory:

- Complete work by Bach (e.g., *The Well-Tempered Clavier*, including prelude and fugue, suite, toccata, etc.)
- Complete sonata by Beethoven, Haydn, Mozart, or Schubert
- Large Romantic work
- Impressionistic or Contemporary work

For more information about audition repertoire requirements, see <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp>.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits

only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 39

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8404	Piano Major	3
MUSC 8414	Piano Major	3
MUSC 8424	Piano Major	3
MUSC 8443	Listening/Learning Skills: Piano I	3
MUSC 8461	Piano Pedagogy I	2
MUSC 8462	Class Piano Pedagogy	2
MUSC 8463	Class Piano Practice Teaching II	2
MUSC 8465	Piano Pedagogy II	2
MUSC 8477	Baroque Keyboard Performance Practice	3
MUSC 8478	Classical Keyboard Performance Practice	3
MUSC 8510	Instrumental Ensemble (2 terms) <sup>1</sup>	2
MUST 8701	Research in Music	3
<b>Electives<sup>2</sup></b>		<b>3</b>
<b>Culminating Courses</b>		
MUSC 8484	Piano Major-Recital	3
MUSC 9995	Final Project in Music	2
<b>Total Credit Hours</b>		<b>39</b>

1

MM candidates must be available for ensemble assignments, which are determined by the department chair and may exceed curricular requirements.

2

Select from Music, Music Education, Music Studies, or other graduate departments. Advisor approval required.

### Additional Requirements:

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor

perform graduation recitals until all diagnostic examinations have been successfully completed."

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Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### *Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number

of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

#### *Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

#### *Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

#### *Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

#### *Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

**Recital Extension:**

Students withdrawing from the recital requirement during the recital term receive an Incomplete and must register for extended study for non-degree credit (MUSC 5000 Recital Extension for 2 credits). Recital Extension must be taken each term until the recital has been presented. This course is offered on a "Credit/No Credit" basis only. Upon satisfactory completion of the recital, the Incomplete for the recital course is replaced by a letter grade and MUSC 5000 Recital Extension is issued a grade of "CR." Credit derived from Recital Extension is not counted toward degree requirements.

1. Recital Extension Fees: Tuition for these additional terms of private study is the cost of 2 graduate credits plus a \$400 Recital Extension fee. Graduate assistantships and other forms of University-sponsored financial aid do not cover the Recital Extension fee.
2. Exceptions to Recital Extension:
  - a. Students who perform their recitals during the first three weeks of the Spring term are not required to register for Recital Extension that term.
  - b. Students who register for Recital Extension during the Summer may perform their recitals during the first three weeks of the Fall term. However, any student who does not take Recital Extension during the Summer may not present the recital in the Fall term, regardless of the date, without also registering for the Fall term of Recital Extension.
3. Failure to Present Recital: The degree status of students who are unable to present a recital after one term of Recital Extension is reviewed by the Associate Dean and the major advisor, who, in consultation with the major teacher and department, determine whether or not the student may continue in the program. Inability to present the recital after one term of Recital Extension may be grounds for dismissal from the degree program for failing to maintain reasonable academic progress.

**Incompletes:**

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Events:****Comprehensive Final Project:**

All candidates for the Master of Music degree must submit a list of all repertoire studied with their studio teacher(s) while enrolled in the MM program. Students choose two stylistically contrasting pieces from their final recital program. (Students enrolled in programs without a recital requirement, such as Opera Coaching, choose two contrasting works studied with their assigned studio teacher.) Students choose to give either an oral presentation or submit a written document that addresses at least several of the following topics:

- Form and harmonic language of the piece
- Historical background of the work
- Aspects of the composer's style
- Relationship to other keyboard works by the composer
- Performance practice considerations
- Specific technical problems and their solutions
- Other relevant information about the piece

The goal of the presentation or paper is to demonstrate cumulative knowledge and skills gained during the course of study at the master's level. Courses taken in research, theory, history, pedagogy and

performance practice can inform the discussion of the particular works chosen by the student.

If the student selects the oral option, the presentation is scheduled during end-of-term juries. At least two representatives from the graduate faculty in the Department of Keyboard Studies adjudicate the oral presentation. The session should last approximately 20 minutes with some extra time for questions from the faculty members following the presentation. Students can perform small sections of the work if germane to their discussion. Lecture notes with cited sources for information should be submitted to the Department of Keyboard Studies no later than ten days before juries.

The written document, if chosen, should be a research-quality paper of approximately 10 pages, double-spaced, and include appropriate references. This should be submitted to the Department of Keyboard Studies no later than April 1 for May graduation or November 15 for January graduation. At least two graduate faculty members from the Department of Keyboard Studies read the paper and confer about the final decision. Students must follow the guidelines for academic honesty found in the Graduate Bulletin.

Each reader grades the project as either pass or fail. Any student who fails is not allowed to graduate at the end of that term. Another document may be submitted after suggestions for improvement by the Department of Keyboard Studies faculty, or another oral presentation is arranged and graded as before. Students who fail a second time are dismissed from the degree program.

**Public Recital:**

Performance majors present a public recital as the culminating event for the master's degree (MUSC 8484). Graduation recitals are typically one hour in length, presented on campus in either Rock Hall or Klein Recital Hall, and adjudicated by three full-time music faculty members. The student must show evidence through Temple University transcript records of having taken private lessons up to the time of the graduation recital. Students who wish to play a recital in the early Fall should plan to register for and complete the final term of lessons during the preceding Summer months.

A recital approval jury must be held to demonstrate the student's ability to perform the degree recital successfully. Normally, this occurs at the preceding term's jury. If, by departmental approval, this jury does not occur, then a jury must be scheduled at least four weeks prior to the recital. If the jury is not successfully completed by that time, the department reserves the right to cancel the recital date. Further details are available from the department chair.

**Pedagogy Final Project:**

A final project (MUSC 9995) is required for completion of the degree. The student writes a research-quality paper that is 15 to 20 pages in length based on important pedagogical theories and/or practices. The chair of the department and appropriate faculty with expertise in piano pedagogy guide the topic of the paper and grade the final project.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/piano-performance-piano-pedagogy-mm-bc-pppp-mmus>

**Department Information:**

Dept. of Keyboard Studies



Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
charles.abramovic@temple.edu  
215-204-7388

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

### Chairperson:

Dr. Charles Abramovic  
charles.abramovic@temple.edu  
215-204-7388

## String Pedagogy MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in String Pedagogy.

## About the Program

The Master of Music in String Pedagogy is for the graduate student who desires to concentrate on the pedagogy of stringed instruments.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** This degree program is accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** While private lessons and ensemble participation are required each term, a major concentration of the curriculum is the study and practice of the teaching of stringed instruments. Included in this concentration are coursework and fieldwork through the College's preparatory division.

**Job Prospects:** The program prepares musicians for either professional activity or doctoral study.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in selected courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated

graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

Applications are processed as they arrive. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Audition:** See <https://www.temple.edu/boyer/admissions/graduate-admissions/audition-requirements.asp> for audition repertoire requirements.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 33*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUED 8653	Learning Theory in Music	3
MUSC 8500	Instrumental Ensemble (4 terms)	4
MUSC 8510	Instrumental Ensemble (2 terms)	2
MUSC 8541	Advanced Orchestral Conducting I-II	2
MUSC 8561	Lower String Pedagogy	3
	or MUSC 8562 Upper String Pedagogy	
MUSC 8566	String Major/Pedagogy	2
MUSC 8567	String Major/Pedagogy	2
MUSC 8568	String Major/Pedagogy	2
MUSC 8569	String Major/Pedagogy	2
MUST 8701	Research in Music	3
<b>Electives</b> <sup>1</sup>		<b>6</b>
<b>Final Pedagogy Project</b>		
MUSC 9996	Final Project: String Pedagogy	2
<b>Total Credit Hours</b>		<b>33</b>

1

Select from Music, Music Education, Music Studies, or other graduate departments. Performance practice courses recommended. Advisor approval required.

### Additional Requirements:

*Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for all entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

*Professional Development Policy:*

In addition to taking the required subjects for their degrees, all students in the Boyer College of Music and Dance are obligated to serve in a number of capacities in order to enrich their academic and musical expertise. Boyer College of Music and Dance believes that such experiences give impetus to successful professional careers. Among the duties that may

be required are conducting laboratory classes; tutoring; teaching private lessons; coaching; participating in the distribution and inventory control of Temple University-owned musical instruments and instructional materials; participating in ensembles; accompanying; performing at admissions and open house events; supervising performance classes; and engaging in other academic activities.

*Performance:*

All bowed string pedagogy majors at the master's degree level must perform in the university orchestra each term they receive lessons.

*Performing Ensembles:*

1. Touring: All students in touring performing ensembles are required to participate in all scheduled tours. These tours, usually one or two weeks in length, often take place immediately after termination of terms. Students must arrange their schedules to accommodate this requirement.
2. Participation: Master's degree candidates in wind, brass and percussion instruments must be available for ensemble assignments at the discretion of the department chair, including participation beyond curricular requirements.
3. Non-Credit Participation: With special permission, graduate students for whom there is no ensemble requirement, or where previous ensemble credits exceed the graduation requirement, may participate in choral and instrumental ensembles without cost, with prior permission from the ensemble director, the department chair and the Associate Dean.

*Independent Study Courses:*

Independent study courses provide a special opportunity for graduate students to work in a highly individualized setting with one or more faculty members. All such study must receive the approval of the faculty member providing the instruction, the students' major advisor, and the Associate Dean. Approval is granted only after the student has presented a detailed description of the intended independent study project. Approval of independent study projects is granted only for students whose academic and musical record provides substantial support for the benefits of this type of study. In no case may more than 20% of a graduate student's curriculum be taken as independent study. Private lessons beyond those required in the curriculum are not an appropriate form of independent study.

*Acceptable English:*

All students, including those for whom English is not the native language, are expected to present all written work in acceptable English. No double standard exists to differentiate students on the basis of proficiency in the use of the English language. Students are also responsible for becoming familiar with the College's statement on plagiarism and academic honesty.

*Graduate Private Lesson Policy:*

Weekly one-hour private lessons are provided for all matriculated master's and doctoral performance majors in good standing, provided at least three additional credits of programmatically required graduate-level study are taken simultaneously. A \$250 per term lesson fee (subject to change without notice) is charged for all private lessons. Tuition remission may not be used to cover the private lesson fee.

Private applied lessons beyond the four-term requirement currently in effect for graduate performance students may be extended with the permission of the jury, department chair, and the Associate Dean or Dean of the Boyer College of Music and Dance.

*Incompletes:*

All incomplete grades and keyboard proficiencies must be fulfilled by the first day of the month in which the student expects to graduate.

**Culminating Event:**

*Final Pedagogy Project:*

The final pedagogy project (MUSC 9996) is based on a subject determined with the major advisor, and may take the form of a lecture/recital, teaching demonstration, research paper, article or method book. Faculty members in the Department of Instrumental Studies grade the final project.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/string-pedagogy-mm-bc-strp-mmus>

### Department Information:

Dept. of Instrumental Studies  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
terell.stafford@temple.edu  
215-204-5527

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*

Professor Jeffrey Solow  
jeffrey.solow@temple.edu  
215-204-5527

*Chairperson:*

Professor Terell Stafford  
terell.stafford@temple.edu  
215-204-8036

## Vocal Arts MM

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the Master of Music in Vocal Arts.

### About the Program

The interdisciplinary Master of Music in Vocal Arts is designed for graduate students who want to continue their education and practice in the disciplines of solo and choral singing in preparation for careers in community music, education or performance. The degree offers an opportunity to broaden the scope of graduate vocal education beyond the classical studio experience. Students complete a core of private

voice lessons and choral ensembles, and may select electives in choral studies, music education, musical theater and voice/opera studies.

In contrast to the Master of Music in Voice Performance, which is a focused program that serves students whose career goal is to become a professional classical voice performer, the Vocal Arts MM allows students to broaden their vocal training to choral music, conducting, music education or musical theater. The Vocal Arts MM program allows students to balance the rigor of classical voice training with the freedom to select an area of focus in another genre.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Accreditation:** Accreditation is being sought from the National Association of Schools of Music (NASM).

**Areas of Specialization:** Within the prescribed credits for the MM in Vocal Arts, students can focus their studies on choral music, conducting, music education or musical theater.

**Job Prospects:** The program prepares students for various careers related to the vocal arts and for further academic training at the doctoral level.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in select courses in music with permission, but may not take applied lessons until they have been fully admitted and matriculated.

**Financing Opportunities:** Boyer College of Music and Dance offers a number of assistantships and academic internships to matriculated graduate students. Full awards carry a cash stipend plus full tuition remission for the Fall and Spring terms. Partial awards also are available in values of 1/4 or 1/2 of a full award. Duties for assistantships and internships vary, but typically include teaching, tutoring, classroom assistance, research, artistic performance and/or direct service related to academic programs. Assistantship and internship awards are made only in the Fall term for up to two terms: Fall and Spring. Awards may be renewed on an annual basis (typically up to one additional year for master's students and up to three years for doctoral students) based on departmental needs as well as satisfactory academic and musical progress by the recipient.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

Applications are processed as they arrive up to the deadline date.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into an applicant's abilities, talents and aptitude for graduate study.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Statement of Goals:** Share your special interests within the discipline and expectations for the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 75
- IELTS Academic: 6.5
- PTE Academic: 51

**Audition:** Applicants must successfully pass a voice audition.

**Resume:** Current resume required.

**Transfer Credit:** A student who wishes to transfer credit should speak with their academic advisor and obtain a "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms." Transfer credits must be approved by the advisor, the department chair, and the Associate Dean. The maximum number of credits a student may transfer is 6.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MUSC 8204	Voice Major	3
MUSC 8214	Voice Major	3
MUSC 8224	Voice Major	3
MUSC 8310	Choral Ensemble (3 terms)	3

MUST 8701	Research in Music	3
<b>Electives</b>		<b>12</b>
Select courses in Choral Conducting, Choral Literature, Music Education, Musical Theater, Opera Diction, Pedagogy, or Vocal Literature		
<b>Public Recital</b>		
MUSC 8284	Voice Major-Recital	3
<b>Total Credit Hours</b>		<b>30</b>

**Language Examination:** To complete the degree, students must fulfill a foreign language requirement in French, German, Italian, Spanish or another language with approval of the chair. This requirement may be fulfilled in any one of three ways:

1. The student successfully completed three terms of a foreign language (one term each of French, German or Italian) as an undergraduate.
2. The student passes a foreign language examination with the requisite language department.
3. The student completes three terms of a foreign language (one term each of French, German or Italian). Since language credits are at the undergraduate level, they do not count toward the MM degree, but they do fulfill the language requirement.

#### Additional Requirements:

##### *Diagnostic Examinations:*

Diagnostic examinations in Aural Theory, Written Theory, and Music History are **required** for **all** entering master's students. The exceptions are students in Jazz Studies and Music Therapy who have their examinations arranged within their respective departments. In addition, Keyboard students take an additional two-hour examination in Keyboard Literature. As stated in the *Boyer College Graduate Handbook*, master's "students may not take final qualifying examinations nor perform graduation recitals until all diagnostic examinations have been successfully completed."

The exams may be taken in one day or split over three days, or the exams can be taken online for a fee. Preparations are provided upon registration. Visit the Boyer College of Music and Dance website for the graduate music examination schedule and registration form.

Please note that registration for a student's first term of study is completed in consultation with the Associate Dean for Student Affairs. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study. It is also best for students to complete MUST 8701 Research in Music, which is required of all students except those in Jazz Studies, Music Education, and Music Therapy in the first year of study.

#### A. Graduate Diagnostic Examination in Aural Theory

The examination lasts approximately 40 minutes and consists of a written portion in which students are asked to:

1. Dictate a chord progression that modulates and contains chromatic harmony by writing out the bass line and identifying chords by Roman numerals and inversions.
2. Complete a two-part melodic dictation that modulates and contains chromatic pitches.

#### B. Graduate Diagnostic Examination in Written Theory

The examination lasts one and one-half hours and is in two parts:

1. Harmonic analysis of two chorales: one that uses diatonic harmony, and one that uses chromatic harmony.
2. Analysis of the form, motives and phrase structures of the first movement of a Classical-era piano sonata.

#### C. Graduate Diagnostic Examination in Music History

The examination lasts one hour and contains objective questions in a multiple choice and/or true/false format. It covers composers, forms, instruments, musical works, styles and terms from 1450 to the present. Sample questions are:

1. The basso continuo came into use in about which year?  
(a) 1500 (b) 1600 (c) 1650 (d) 1700
2. Who composed *Das Lied von der Erde* (The Song of the Earth)?  
(a) Mahler (b) Bruckner (c) Brahms (d) Schumann
3. Which of the following instruments would not be found in the score of a symphony by Haydn?  
(a) horn (b) oboe (c) timpani (d) trombone (e) trumpet

#### D. Conditions for Exemption from Diagnostic Examinations

The requirement to take the Diagnostic Examination in any area is waived only for graduates of the Boyer College of Music and Dance who:

- matriculate and enroll in the term immediately following completion of all undergraduate degree requirements; and
- received grades of "B-" or better in every undergraduate course taken in each individual examination area to be waived.

#### Culminating Events:

##### *Comprehensive Examination:*

Candidates for the Master of Music degree are required to complete a one-hour comprehensive examination in music literature and music theory. The examination is in three parts, all of which must be passed:

- identification of specific selections from a list of 100 musical works of the standard literature from the Middle Ages through the 20th Century;
- identification of one "mystery" selection not found on the list; and
- score analysis.

The examination, which is administered in both the Fall and Spring terms, may be taken at any time in a student's program. Two graduate faculty members grade the examination.

##### *Final Project:*

The supervised final project (MUSC 8284) reflects the student's areas of study, culminating in a unique one-hour public performance, at least half of which must be the candidate's solo performance. The interdisciplinary nature of the degree affords several project options for the final project performance, including choral conducting, lecture recital, thesis or vocal recital that could include both classical and contemporary commercial music repertoire.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/vocal-arts-mm-bc-vcar-mmus>

## Department Information:

Dept. of Vocal Arts  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
christine.anderson@temple.edu  
215-204-8375

## Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

## Department Contacts:

### Admissions:

James Short  
jshort@temple.edu  
215-204-8598

### Program Coordinator:

Dr. Christine Anderson  
christine.anderson@temple.edu  
215-204-8375

### Chairperson:

Dr. Paul Rardin  
rardin@temple.edu  
215-204-4742

## Graduate Certificate: Music Teaching

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the graduate certificate in Music Teaching.

### About the Certificate

The graduate certificate program in Music Teaching offers those with at least a bachelor's degree in music or its equivalent a pathway to becoming a certified PK-12 music teacher in Pennsylvania. The goal is to achieve competencies and co-curricular credentials required by the Pennsylvania Department of Education (PDE) in preparation for one semester of full-time PK-12 music student teaching and, ultimately, Temple University's recommendation of the student to PDE for certification to teach PK-12 music in Pennsylvania.

In preparation to meet credentialing requirements, the student must have a 3.0 cumulative or higher GPA in their undergraduate degree; carry a 3.0 or higher GPA throughout their graduate certificate coursework; file evidence of four clearances annually by the required deadlines to engage in field, extern and student-teaching assignments; and file evidence of passing scores on two *Praxis*® exams: Fundamental Subjects: Content Knowledge (5511) and Music: Content Knowledge (5113). Up to 9 hours of certificate coursework completed with a grade of "B" or higher can be applied as electives to the MM in Music Education graduate program within two academic terms (i.e., Fall/Spring or Spring/Fall) of completing the certificate.

Students engage as preservice music teachers in preparation for general and choral or instrumental music student teaching at the elementary and secondary levels. Faculty guide certificate program students in learning, demonstrating, analyzing, applying, documenting and reflecting on PK-12 preservice music teaching skills, knowledge, attitudes and professional competencies comprising inclusive, contemporary music-education practices. Upon successfully meeting the certificate's curricular and co-curricular requirements and demonstrating preprofessional dispositions, students are eligible for Temple University's recommendation to PDE for Level I PK-12 Music Education Certification.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis. The student-teaching semester requires a full-time commitment.

**Accreditation:** The degree programs of Boyer College of Music and Dance are accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** All students complete specialization in general music coursework and, in their final semester, complete elementary student teaching. Upon application, applicants additionally declare either a choral or instrumental specialization to complete the minimum prerequisite courses in preparation for secondary student teaching in their final semester. The choral or instrumental specialization focuses the student's secondary student-teaching placement.

**Job Prospects:** With PK-12 music certification from PDE, graduates can apply for music teaching jobs within Pennsylvania. For information about the portability of the PK-12 music certification from PDE to other states in the United States, visit <https://www.temple.edu/professional-licensure-disclosures> and/or contact Alison.Reynolds@temple.edu.

**Non-Matriculated Student Policy:** Students admitted to the certificate program are classified as non-matriculated graduate students by the University, since the program does not lead to a degree. No portion of the Music Teaching curriculum can be completed by credit transfer from another institution. Credit earned in Music Teaching can only be transferred to the Music Education MM program and is limited to 9 credits.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 1  
*Spring:* November 15

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's abilities, talents and aptitude for graduate study in general and PK-12 music teaching.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a

curriculum of 124 to 135 hours. A GPA of 3.0 or higher must have been attained.

In addition, departmental review of the application may identify competencies the applicant will need to achieve through additional coursework to best prepare for student teaching and recommendation to PDE for PK-12 music teaching in Pennsylvania. Graduate certificate students may opt to take additional credits.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is preferred. Submit all official transcripts for all coursework taken previously from all institutions attended, whether or not a degree was awarded.

Applicants who have fluent music skills and flexible musicianship with a bachelor's degree in a different discipline are encouraged to contact Dr. Alison Reynolds at Alison.Reynolds@temple.edu.

**Statement of Goals:** Provide a written account of your accomplishments to date, goals and expectations for the program, goals for beyond the program, and special interests in becoming certified in Pennsylvania to teach PK-12 music.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61

NOTE: As of May 2020, applicants to PDE for PK-12 music certification who earned their baccalaureate or higher degree in a country other than the United States may be eligible for certification if they meet PDE's requirements. For more information, visit <https://www.education.pa.gov/Educators/Certification/OutOfState/Pages/Foreign-Educated-Teacher-Certification-Applicants.aspx>.

**Resume:** Your current resume must be submitted electronically with other supporting application materials.

**Interview:** After the complete admissions application has been received by Temple University, applicants should contact Dr. Alison Reynolds at Alison.Reynolds@temple.edu to schedule an interview.

**Academic and Musical Profile (AMP):** The Academic and Musical Profile (AMP) consists of two parts:

1. Music Skills: At the time of application, applicants submit a digital video of no more than 15 minutes. The video should feature clips in which applicants demonstrate their musicianship and the types of activities they currently associate with music teaching and learning interactions, with at least one other person engaging in the activities with them. If declaring Choral, applicants need to feature music-making using their singing voice, but are welcome to demonstrate their ability to play other instruments. If declaring Instrumental, applicants need to feature music-making playing a primary instrument and their singing voice, but are welcome to demonstrate their ability to play other instruments. Given complications related to COVID-19, video recording of online engagement featuring musicianship and communication skills of the applicant are acceptable. All applicants

should include a brief written narrative explaining the contents of the video.

2. Writing: Upon completing the formal half-hour application interview, applicants agree to a 90-minute session during which they complete the writing portion of the AMP. This allows applicants to feature their best writing in real time in response to prompts resonating with each applicant's lived experiences. The exam is evaluated by Music Education faculty. Results are considered in the admissions decision.

**Other:** Due to the large number of applications for admission and the competitive nature of its music programs, the College admits only a portion of its applicants. In addition to the general admissions credentials required of all Temple University graduate applicants, specialized admission criteria (i.e., auditions, portfolios, interviews, recommendations, departmental term papers, and standardized examinations) are very heavily weighted in admission decisions of the Boyer College of Music and Dance. Graduate applicants may be rejected for admission for failing to obtain the required level of proficiency in any one area of the specialized admission criteria regardless of the level of success in meeting the Temple University general admission criteria. In addition to the level of success demonstrated in the above-mentioned criteria, a final admission factor is the College's Optimum Enrollment Policy. This policy may preclude the admission of any student who meets the minimum requirements.

Applicants are encouraged, but not required, to submit any additional information that will help the faculty making an admissions decision. Additional items may include, but are not limited to, digital recordings of compositions or arrangements, recordings of performance groups, lesson or rehearsal plans, curriculum development material, and recital performance recordings.

Finally, additional fees are applicable for some courses, lessons and ensembles.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 25*

*Required Courses:*

### Elementary General Music/Choral Track <sup>1</sup>

Code	Title	Credit Hours
<b>Core Courses</b>		
MUED 5661	Teaching Students with Special Needs	3
MUED 5665	Music Learning and Development	3
MUED 5669	Teaching Choral Music to Inclusive Populations (TCMIP)	3
MUED 5672	School Choral Ensembles	2
MUED 5678	Inclusive Vocal Development	2
MUED 5696	Teaching General Music to Inclusive Populations (TGMIP)	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Student Teaching Courses</b>		
MUED 5168	Student Teaching Seminar	2
MUED 5189	Student Teaching Elementary	2

MUED 5289	Student Teaching Secondary	2
<b>Total Credit Hours</b>		<b>25</b>

1

Registration for a student's first term of study is completed in consultation with the coordinator of the Music Teaching program. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study.

## Elementary General Music/Instrumental Track

1

Code	Title	Credit Hours
<b>Core Courses</b>		
Select four from the following: <sup>2</sup>		4
MUED 5551	Percussion	
MUED 5552	Woodwinds I	
MUED 5553	Upper Strings	
MUED 5554	Lower Strings	
MUED 5555	Brass I	
MUED 5556	Brass II	
MUED 5557	Woodwinds II	
MUED 5661	Teaching Students with Special Needs	3
MUED 5665	Music Learning and Development	3
MUED 5667	Teaching Instrumental Music to Inclusive Populations (TIMIP)	3
MUED 5696	Teaching General Music to Inclusive Populations (TGMIP)	3
TESL 5631	Foundations of Language Teaching: Meeting the Needs of English Language Learners	3
<b>Student Teaching Courses</b>		
MUED 5168	Student Teaching Seminar	2
MUED 5189	Student Teaching Elementary	2
MUED 5289	Student Teaching Secondary	2
<b>Total Credit Hours</b>		<b>25</b>

1

Registration for a student's first term of study is completed in consultation with the coordinator of the Music Teaching program. Please re-read the admission letter, especially the "Special Notes" section on page 2, regarding any entrance deficiencies. If any remedial coursework is required, it must be completed by the end of the first year of study.

2

Course selection is done in consultation with the coordinator of the Music Teaching program.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Additional Requirements:

#### Standards of Scholarship:

The following standards of scholarship apply for students in the Music Teaching graduate certificate program:

- Maintain a 3.0 or higher GPA in each course to ensure the certificate student maintains an overall 3.0 or higher GPA required by PDE for Level I PK-12 Music Education Certification in Pennsylvania.

- Students who earn below a 3.0 in a single certificate course may repeat the same course once to replace the original grade. If after repeating the course once without satisfactorily raising the grade, the certificate student is dismissed from the certificate program.

Additionally, these time-sensitive co-curricular requirements must be met by students in the certificate program:

- Upon full-time entry to the certificate program, the student must apply for student teaching.
- Prior to the student-teaching semester, the certificate student is required to complete sequenced coursework and field placements. During the sequence, the student learns, demonstrates, analyzes, applies, documents and reflects on preservice music teaching skills, knowledge, attitudes and professional competencies comprising inclusive contemporary music education practices, including demonstrating preprofessional dispositions.
- Additional co-curricular requirements must also be met as follows:
  - As directed by the guidelines of the College of Education and Human Development in conjunction with Boyer College's Department of Music Education and Therapy, the certificate student is responsible for annually filing evidence of all clearances. School districts require the clearances for students engaging in observation, field, extern and student-teaching assignments in PK-12 school-music contexts.
  - Without evidence of clearances filed, the certificate student cannot enter PK-12 school-music contexts. Thus, without clearances, the certificate student cannot complete certificate course requirements and will not be permitted to retain enrollment in certificate program classes.
  - One semester prior to the student-teaching semester, the certificate student updates the student-teaching application and participates in a scheduled formal interview with the Coordinator of Student Teaching. Together, the student and coordinator review the application for remaining requirements and projected achievements relative to their completion. Placements are not confirmed at that time. Instead, types of experiences in music teaching and learning are prioritized, and conversations are held about transportation and the timing of elementary and secondary placements.
  - Ninety days prior to student teaching, the certificate student needs to have filed evidence of passing scores on two *Praxis*® standardized tests required by PDE, including Fundamental Subjects: Content Knowledge (5511) and Music: Content Knowledge (5113). Certificate students are responsible for filing the scores with the Department of Music Education and Therapy in addition to having requested that the *Praxis*® scores be sent to Temple University.

### Student Teaching Semester:

With prerequisite coursework and all co-curricular requirements completed, the certificate student is eligible to engage daily (i.e., Monday through Friday mirroring the hours and activities of students assigned to the music teacher's school day) over one semester of music student teaching in two placements: elementary and secondary. The certificate student is responsible for transportation to and from the placement sites.

During the student-teaching semester, the certificate student is required to continue to have filed clearances through the end of the semester and to maintain a 3.0 or higher GPA. The certificate student is assigned to a cooperating school music teacher and to a Boyer College of Music and Dance supervising faculty member for the elementary and secondary



placements. Certificate student teachers may be observed informally in each placement and will be observed formally twice during each student-teaching placement using form PDE-430: Pennsylvania Statewide Evaluation Form for Student Professional Knowledge and Practice. Being formally and informally observed prepares the certificate student for entering the in-service music teaching profession.

In the weekly student-teaching seminar, typically held in person Mondays from 4:00 to 6:00 p.m., certificate music students professionally plan and reflect on all assignments.

**Culminating Event:** Successful completion of coursework and the student teaching experience constitute the culminating event.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/music-teaching-certificate-graduate-bc-mutc-grad>

### Department Information:

Dept. of Music Education and Therapy  
Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
Alison.Reynolds@temple.edu  
215-204-8310

### Submission Address for Application Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*  
James Short  
jshort@temple.edu  
215-204-8598

*Program Coordinator:*  
Alison Reynolds, PhD  
Alison.Reynolds@temple.edu  
215-204-1660

*Chairperson:*  
Alison Reynolds, PhD  
Alison.Reynolds@temple.edu  
215-204-1660

## Graduate Certificate: Professional Studies

Center for the Performing and Cinematic Arts / BOYER COLLEGE OF MUSIC AND DANCE

Learn more about the graduate certificate in Professional Studies.

### About the Certificate

The post-master's certificate program in Professional Studies is rooted in the conservatory tradition with a strong emphasis on advanced

performance study. It offers a year of comprehensive study and intensive training in major performance areas. Students choose from 12 instruments, including brass, cello, classical guitar, double bass, historical keyboard instruments, opera, percussion, piano, viola, violin, voice and woodwinds.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program is completed on a full-time basis.

**Accreditation:** The degree programs of Boyer College of Music and Dance are accredited by the National Association of Schools of Music (NASM).

**Areas of Specialization:** The Professional Studies post-master's certificate is offered in the following instruments:

- Brass
- Cello
- Classical Guitar
- Double Bass
- Historical Keyboard Instruments
- Opera
- Percussion
- Piano
- Viola
- Violin
- Voice
- Woodwinds

**Job Prospects:** The certificate program prepares musicians who are already performing at the post-master's level with specialized preparation for the professional world.

**Non-Matriculated Student Policy:** Students admitted to the certificate program are classified as non-matriculated graduate students by the University, since the program does not lead to a degree. No portion of the Professional Studies curriculum can be completed by credit transfer from another institution. Additionally, credit earned in Professional Studies cannot be transferred to another Boyer College program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring:* Admission is on a rolling basis. Interested students should contact [music@temple.edu](mailto:music@temple.edu) for permission to enroll in coursework.

**Coursework Required for Admission Consideration:** All applicants must present credentials that are the equivalent of the appropriate Bachelor of Music degree at Temple University, which is based on a curriculum of 124 to 135 hours. To enroll in the post-master's certificate program, candidates must hold the Master of Music degree (or the equivalent) in the field of specialization from an accredited institution.

**Master's Degree in Discipline/Related Discipline:** A degree in Music is expected.

**Bachelor's Degree in Discipline/Related Discipline:** A degree in Music is expected.

## Certificate Requirements

Number of Credits Required to Complete the Certificate: 18

Required Courses:

### Brass, Classical Guitar, Percussion, and Woodwinds

Code	Title	Credit Hours
MUSC 8500	Instrumental Ensemble (2 terms)	2
MUSC 9001	Appl Music-Prof Studies	4
MUSC 9002	Appl Music-Prof Studies	4
Ensemble or Repertoire course (2 terms)		2
Elective (2 terms) <sup>1</sup>		6
<b>Total Credit Hours</b>		<b>18</b>

1

Students select electives to meet their individual needs. These may be advanced theory or history courses, performance practice courses, non-music courses that support the student's major study, or courses designed to fill gaps in earlier study. With departmental permission, elective credits may also be fulfilled by additional repertoire or ensemble courses, but only if this does not limit the participation of students in other programs in the College.

### Cello, Viola, and Violin

Code	Title	Credit Hours
MUSC 8500	Instrumental Ensemble (2 terms)	2
MUSC 8510	Instrumental Ensemble (2 terms)	2
MUSC 8555	Orchestral Repertoire (2 terms)	2
MUSC 9001	Appl Music-Prof Studies	4
MUSC 9002	Appl Music-Prof Studies	4
Elective (2 terms) <sup>1</sup>		4
<b>Total Credit Hours</b>		<b>18</b>

1

Students select electives to meet their individual needs. These may be advanced theory or history courses, performance practice courses, non-music courses that support the student's major study, or courses designed to fill gaps in earlier study. With departmental permission, elective credits may also be fulfilled by additional repertoire or ensemble courses, but only if this does not limit the participation of students in other programs in the College.

### Double Bass

Code	Title	Credit Hours
MUSC 8500	Instrumental Ensemble (2 terms) or MUSC 8510 Instrumental Ensemble	2
MUSC 9001	Appl Music-Prof Studies	4
MUSC 9002	Appl Music-Prof Studies	4
Ensemble or Repertoire course (2 terms)		2
Elective (2 terms) <sup>1</sup>		6
<b>Total Credit Hours</b>		<b>18</b>

1

Students select electives to meet their individual needs. These may be advanced theory or history courses, performance practice courses, non-music courses that support the student's major study, or courses designed to fill gaps in earlier study. With departmental permission, elective credits may also be fulfilled by additional repertoire or ensemble courses, but only if this does not limit the participation of students in other programs in the College.

### Historical Keyboard Instruments and Piano

Code	Title	Credit Hours
MUSC 9001	Appl Music-Prof Studies	4
MUSC 9002	Appl Music-Prof Studies	4
Ensemble, Accompanying, Literature, or Repertoire course (2 terms)		4
Elective (2 terms) <sup>1</sup>		6
<b>Total Credit Hours</b>		<b>18</b>

1

Students select electives to meet their individual needs. These may be advanced theory or history courses, performance practice courses, non-music courses that support the student's major study, or courses designed to fill gaps in earlier study. With departmental permission, elective credits may also be fulfilled by additional repertoire or ensemble courses, but only if this does not limit the participation of students in other programs in the College.

### Opera

Code	Title	Credit Hours
MUSC 8231	Opera Role Preparation	3
MUSC 8232	Opera Role Preparation	3
MUSC 8235	Opera Vocal Lessons	2
MUSC 8236	Opera Vocal Lessons	2
Elective (2 terms) <sup>1</sup>		8
<b>Total Credit Hours</b>		<b>18</b>

1

Students select electives to meet their individual needs. These may be advanced theory or history courses, performance practice courses, non-music courses that support the student's major study, or courses designed to fill gaps in earlier study, although it is recommended that those in Opera take 2 credits of MUSC 8215 Vocal Coaching. With departmental permission, elective credits may also be fulfilled by additional repertoire or ensemble courses, but only if this does not limit the participation of students in other programs in the College.

### Voice

Code	Title	Credit Hours
MUSC 9001	Appl Music-Prof Studies	4
MUSC 9002	Appl Music-Prof Studies	4
Ensemble, Repertoire, Literature, or other Performance course (2 terms)		4
Elective (2 terms) <sup>1</sup>		6
<b>Total Credit Hours</b>		<b>18</b>

1

Students select electives to meet their individual needs. These may be advanced theory or history courses, performance practice courses, non-music courses that support the student's major study, or courses designed to fill gaps in earlier study. With departmental permission, elective credits may also be fulfilled by additional repertoire or ensemble courses, but only if this does not limit the participation of students in other programs in the College.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

**Additional Requirements:** Only grades of "B-" and higher count toward certificate requirements.

**Culminating Event:** A graduation recital is not required. Students are, however, required to play a jury each academic term.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/professional-studies---music-certificate-graduate-bc-pfst-grpm>

### Admissions Information:

Center for the Performing and Cinematic Arts/Boyer College of Music and Dance  
129 Presser Hall  
2001 N. 13th Street  
Philadelphia, PA 19122-6079  
[music@temple.edu](mailto:music@temple.edu)  
215-204-8598

### Submission Address for Application

#### Materials:

<https://apply.temple.edu/Boyer/>

### Department Contacts:

*Admissions:*

James Short  
[jshort@temple.edu](mailto:jshort@temple.edu)  
215-204-8598

## Center for the Performing and Cinematic Arts / School of Theater, Film and Media Arts

The School of Theater, Film and Media Arts brings the Department of Theater and the Department of Film and Media Arts under the umbrella of the Center for the Performing and Cinematic Arts.

### Theater

Located on the northern edge of the Avenue of the Arts and just minutes away from the heart of Philadelphia's thriving theater community, the Department of Theater has established itself as one of the finest theater training programs in the nation. Many of our alumni are thriving as actors, directors, playwrights, designers and technicians. They are working artists with credits on stage, television and film here in Philadelphia; in major entertainment industry centers like New York City and Los Angeles; and with professional theater companies all across the country and internationally.

The Professional Training Program in Theater at Temple University, which awards the Master of Fine Arts (MFA), has distinguished itself as one of the foremost theater training and performance institutions in the nation and as an important contributor to the Philadelphia theater landscape. Our MFA actors, directors, designers, playwrights and technicians collaborate with professional faculty, staff and guest artists to train and produce exciting contemporary theater, encompassing a broad range of genres and styles, including classics, new plays and musicals, for a diverse campus and public audience. Our faculty is comprised of a collaborative team of experienced, celebrated working professionals and distinguished scholars from the theater world, who, as both teachers and mentors, generously share their consummate artistry, seasoned expertise and great passion for practicing the craft of theater.

### Film and Media Arts

The Master of Fine Arts (MFA) program in the Department of Film and Media Arts (FMA) is the country's foremost program in alternative film, video and new media. Temple's FMA department is internationally recognized as a center for filmmaking that is socially engaged, activist, diverse, interdisciplinary and international. With approximately 40 graduate students from diverse communities and countries, the program is large enough to offer intellectual stimulation through a wide range of courses, yet small enough to afford individual attention, maximum access to equipment, and creative control over one's own projects.

The MFA in FMA is viewed as a creative laboratory for producing works of social significance and artistic merit. We are committed to advancing methods that articulate alternative voices, including those of women; people of color; and others who have been economically, politically or artistically disenfranchised. We look for students with strong creative ideas, experiences and critical depth, no matter their background. FMA students come from all over the world, including through programs like Fulbright. Situated in Philadelphia's thriving arts scene, diverse communities and institutions, the program additionally offers students wide-ranging opportunities for collaborations and audiences.

The MFA is a terminal degree comparable to a doctoral degree, with the notable exception that the Temple program stresses a creative synthesis of both production and theory, requiring comprehensive exams and a final creative project instead of a dissertation. Students work with faculty who are international leaders in their fields with awards from Fulbright,

Guggenheim, Jerome, the National Endowment for the Arts, the National Endowment for the Humanities, Pew and Rockefeller as well as major film, art and publication credits. Temple's MFA in FMA allows filmmakers, videomakers, screenwriters and media artists to challenge the current practices of Hollywood, commercial television and global media. With a combination of academic and professional training, the degree qualifies graduates to teach on the university level.

The MFA program at Temple is one of the most recognized graduate programs in the country in terms of national and international film and video awards. Temple graduate students have received nationally competitive:

- University Film and Video Association production grants,
- National Endowment for the Arts media fellowships, and
- Eastman Kodak Scholarships, the nation's most competitive scholarship in cinematography.

Temple graduate students have also received major recognition at:

- American Film Institute FEST, Ann Arbor Film Festival, Asian American International Film Festival, Chicago International Film Festival, the Dore Schary Awards, New York Film Festival, Philadelphia Film Festival, San Francisco International Film Festival, and Sundance Film Festival, as well as
- Numerous festivals across the globe in Athens, Berlin, Bonn, Dallas, Houston, London, Melbourne, Montreal and Paris.

Major professional recognition for student projects includes:

- Hollywood's coveted Academy Nicholl Fellowship in Screenwriting,
- Several Oscar nominations, and
- Awards from both the Academy of Motion Picture Arts and Sciences and the Academy of Television Arts and Sciences.

In addition, Temple MFA productions have been picked up for distribution by such prestigious organizations as:

- Coe Film Associates
- Direct Cinema Limited
- Museum of Modern Art
- New Day Films
- Women Make Movies

and for national and international broadcasts in the United States, Asia, Australia, Canada and Europe.

### Graduate Programs and Certificates

- Documentary Arts and Visual Research PhD (p. 708)
- Film and Media Arts MFA (p. 711)
- mediaXarts: Cinema for New Technologies and Environments MA (p. 713)
- Musical Theater Collaboration MFA (p. 715)
- Theater/Acting MFA (p. 718)
- Theater/Design MFA (p. 719)
- Theater/Directing MFA (p. 721)
- Theater/Playwriting MFA (p. 723)
- Theater Instruction MA (p. 724)

- Graduate Certificate: Documentary Arts and Ethnographic Research (p. 726)
- Graduate Certificate: Theater Instruction (p. 727)

## Graduate Faculty

*Nora Alter*, Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; PhD, University of Pennsylvania.

*Warren F. Bass*, Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MFA, Columbia University.

*Chris Cagle*, Associate Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; PhD, Brown University.

*Marie Anne Chiment*, Professor, Department of Theater, School of Theater, Film and Media Arts; MFA, New York University Tisch School of the Arts.

*Roderick L. Coover*, Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; PhD, University of Chicago.

*Peter P. d'Agostino*, Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MA, San Francisco State University.

*Sarah Drury*, Associate Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MA, New York University Tisch School of the Arts.

*Fred M. Duer*, Professor, Department of Theater, School of Theater, Film and Media Arts; MFA, Ohio University.

*LeAnn Erickson*, Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MFA, University of Iowa.

*Marcus Giamatti*, Associate Professor, Department of Theater, School of Theater, Film and Media Arts; MFA, Yale University.

*Lindsay Goss*, Assistant Professor, Department of Theater, School of Theater, Film and Media Arts; PhD, Brown University.

*Steven Gross*, Associate Professor, Department of Theater, School of Theater, Film and Media Arts; PhD, Yale University.

*David Ingram*, Associate Professor of Instruction, Department of Theater, School of Theater, Film and Media Arts; MFA, New York University Tisch School of the Arts.

*Lynne Innerst*, Associate Professor, Department of Theater, School of Theater, Film and Media Arts; MFA, University of Southern California.

*Michael J. Kuetemeyer*, Associate Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MFA, Temple University.

*Kartik Nair*, Assistant Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; PhD, New York University.

*Chet Pancake*, Associate Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MFA, School of the Art Institute of Chicago.

*Donna Snow*, Associate Professor, Department of Theater, School of Theater, Film and Media Arts; MFA, American Conservatory Theater.

*Jennifer Stafford*, Assistant Professor, Department of Theater, School of Theater, Film and Media Arts; MFA, New York University Tisch School of the Arts.

*Elisabeth Subrin*, Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MFA, School of the Art Institute of Chicago.

*Rea Tajiri*, Associate Professor, Department of Film and Media Arts, School of Theater, Film and Media Arts; MFA, California Institute of the Arts.

*Douglas C. Wager*, Professor, Department of Theater, School of Theater, Film and Media Arts; MFA, Boston University.

*Kimmika Williams-Witherspoon*, Associate Professor, Department of Theater, School of Theater, Film and Media Arts; PhD, Temple University.

## Documentary Arts and Visual Research PhD

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER, FILM AND MEDIA ARTS

Learn more about the Doctor of Philosophy in Documentary Arts and Visual Research.

### About the Program

The PhD program in Documentary Arts and Visual Research is designed for students who have developed a professional level of technological artistry in sound and image production through the completion of an MFA degree and who want to apply their skills to develop visual research projects or to reflect critically on traditional and digital forms of cinema through scholarship and technological analysis. The PhD program offers MFA graduates the opportunity to use their creative education to take on the intellectual challenge of our technological age: the expression of ideas, once communicated entirely by written means but now through multiple forms of media.

In the PhD program, students explore research questions based in field-based research, critical analysis and/or history of nonfictional forms in film, media arts and emerging technologies. The intertwining relationships of theory and practice are at the heart of this interdisciplinary program. Students enter with both a professional mastery production in cinema and media arts or a related field as well as strong scholarly skills. Thus, they can create groundbreaking work that moves fluidly between creative and critical approaches to images and the stories they tell. Doctoral projects may draw from multiple disciplines and research methods in the arts, humanities and sciences. The projects may take many forms, such as those of critical, digital and visual research in the humanities, interactive and emergent forms of writing, and cross-disciplinary visual ethnography.

Learning outcomes include the ability to:

- apply advanced visualization technologies and creative methods in the pursuit of original scholarly research;
- expand critical research from both theoretical and applied perspectives;
- pursue scholarly careers in a vital and emerging technological field; and

- work with research teams that are engaged in digital scholarship and visualization in such diverse fields as anthropology, geography and media studies.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program is expected to be completed on a full-time basis.

**Interdisciplinary Study:** The program requires students to take one appropriate interdisciplinary elective from inside or outside of the department.

**Ranking:** Temple's Film and Media Arts graduate programs are ranked among the top 10 film/video programs nationally and within the top three programs offered by public institutions.

**Areas of Specialization:** Dr. Roderick Coover, Program Director, has been working in the areas of visual research, interactive documentary cinema, and experimental ethnography since the 1990s. Dr. Nora Alter publishes books and other critical works on essay films, German nonfiction cinema, and other related topics. Dr. Chris Cagle publishes books and essays on documentary theory and practice. Dr. Kartik Nair's research focuses on the transnational infrastructures of popular visual cultures.

Additionally, many of the program's practice-oriented faculty, including Professors Warren Bass, Peter d'Agostino, Sarah Drury, LeAnn Erickson, Michael Kuetemeyer, David Parry, Eran Preis, Jeff Rush, and Rea Tajiri, make documentary works or works integrating documentary praxis. Students also have opportunities to work with faculty in related departments both within the Center for the Performing and Cinematic Arts and beyond.

**Job Prospects:** Graduates are prepared for advanced career opportunities in academia, research-based documentary production, cultural institutions/foundations, research institutions, arts curating, emerging media technologies and industries, and critical writing wherein both interdisciplinary and applied perspectives are invaluable.

**Non-Matriculated Student Policy:** Coursework is limited to those matriculating in the PhD program.

**Financing Opportunities:** Contact the department directly for more information.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 1

Applications are evaluated together after the deadline has passed. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty familiar with the applicant's academic

competency and/or professionals working in film, media arts and documentary forms, or other closely related fields.

**Coursework Required for Admission Consideration:** Students who earned their MFA at a university other than Temple should contact the PhD Program Director, Dr. Roderick Coover, at roderick.coover@temple.edu to ensure that their graduate work prepares them for the PhD degree.

**Master's Degree in Discipline/Related Discipline:** All applicants must have earned a Master of Fine Arts degree in film or media arts or be in the final year of their MFA program. The PhD program is designed for students seeking to integrate production and theory who have finished their MFA degree by the end of the summer before the PhD program begins.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

*Applicants educated in China* should review the information found on the Graduate School website regarding the submission of education documents to Temple University. See <https://grad.temple.edu/admissions/international-applicants/before-you-apply>. The admissions committee for the Documentary Arts and Visual Research PhD program will review your materials to determine your admissions status provided the required documentation is submitted in support of your application.

**Statement of Goals:** In approximately 500 words, describe your primary goals and areas of interest for your doctoral studies, as well as your long-term professional aims and relevant biographical information.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Portfolio:** Applicants must submit a portfolio, which should include work related to their proposed doctoral goals. The applicant's role in each work must be clearly indicated.

**Resume:** Current resume required.

**Writing Sample:** Submission of a scholarly writing sample related to the applicant's doctoral goals is also required.

**Advanced Standing:** The PhD in Documentary Arts and Visual Research program consists of 37 discrete credits taken beyond the MFA degree. At the time of admission, the entire MFA degree serves as advanced standing credits. These credits are not counted toward the 37 required credits of the doctoral degree. However, students may transfer into the doctoral degree up to 6 graduate credits in coursework taken beyond the MFA degree. Typically, this coursework is reviewed after admission to the PhD degree and must be approved by the Film and Media Arts committee.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the MFA: 37

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
Select courses from the following that total 11 credits:		11
FMA 5468	Art-Culture-Technology Seminar <sup>1</sup>	
FMA 5671	Film Theory Seminar <sup>1</sup>	
FMA 8462	Documentary Arts and Visual Research <sup>1</sup>	
FMA 8680	Advanced Topics in Media Arts Studies	
FMA 9346	Methodologies and Praxis	
Additional FMA graduate courses and FMA 9683 Directed Readings <sup>2</sup>		17
Non-FMA graduate course <sup>2</sup>		3
<b>Research Courses <sup>3</sup></b>		<b>6</b>
FMA 9994	Doctoral Comprehensive Exam Study	
FMA 9998	Doctoral Dissertation Proposal	
FMA 9999	Doctoral Dissertation	
<b>Total Credit Hours</b>		<b>37</b>

1

Students who have previously taken FMA 5468, FMA 5671 and/or FMA 8462 are required to substitute a graduate-only course(s) taught by doctoral faculty with approval from the student's advisor and the Program Director.

2

Students select courses with approval from the Program Director. An additional 3-credit graduate course taken outside the department may be substituted for 3 credits of FMA required courses and Directed Readings.

3

The Graduate School requires that students complete a minimum of 6 research credits that include FMA 9994, FMA 9998 and FMA 9999. Of the 6 credits, at least 2 credits must be earned in FMA 9999.

#### **Culminating Events:**

##### *Comprehensive Exam:*

The list of examiners must be submitted to the Program Director no later than the first week of the term in which the exam is anticipated. The exam is conducted with at least three doctoral-level faculty of the Graduate School of Temple University. The examination committee chair must be faculty in the Department of Film and Media Arts. Additional doctoral-level examiners are permitted. The exam must be conducted no later than the 14th week of the term in which the exam is anticipated and signed approval must be submitted according to the Graduate School guidelines.

##### *Proposal:*

The formation of a dissertation committee must be submitted to the Program Director no later than the first week of the term in which a dissertation proposal is to be submitted. Students develop their dissertation proposal through individual tutorials and group workshops. The dissertation proposal is due no later than March 30. The Dissertation Examining Committee Chair must be a tenured or tenure-track doctoral faculty member from the Department of Film and Media Arts. The dissertation proposal deadline is set by the committee and is conducted according to the Graduate School guidelines.

##### *Dissertation:*

Students work with their dissertation advisor to complete the dissertation. Doctoral dissertation projects are to employ the latest visualization technologies.

Early in the term in which a defense of the dissertation is anticipated, the major advisor notifies the Associate Dean that it is time to appoint the Dissertation Examining Committee (DEC). The DEC consists of the Doctoral Advisory Committee (DAC) plus an "outside" reader, who is an additional graduate faculty member from Temple or another university, but not from the faculty of the student's home department.

Doctoral candidates must schedule a defense of the dissertation with the Associate Dean at least one month before the requested defense date. The "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," must bear all appropriate signatures and be submitted to the Associate Dean.

Two weeks prior to the oral defense, the student submits individual copies of the abstract and the completed dissertation to the Associate Dean and each member of the DEC. The graduate secretary notifies the Graduate School and posts notices of the impending defense on bulletin boards located within the School of Theater, Film and Media Arts. All members of the DEC attend the oral defense and then vote to pass or fail the dissertation and its defense after the conclusion of the public presentation.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/documentary-arts-and-visual-research-phd-ca-davr-phd>

### **Department Information:**

Film and Media Arts Graduate Admissions

Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts

2001 N. 13th Street, 127 Presser Hall

Philadelphia, PA 19122-6016

FilmMFA@temple.edu

215-204-8598

Fax: 215-204-4957

### **Submission Address for Application Materials:**

<https://apply.temple.edu/TFMA/>

### **Department Contacts:**

#### *Admissions:*

James Short

Recruitment Coordinator

jshort@temple.edu

#### *Program Director:*

Roderick Coover

rcoover@temple.edu

#### *Chair:*

Chet Pancake

chet.pancake@temple.edu

## Film and Media Arts MFA

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER,  
FILM AND MEDIA ARTS

Learn more about the Master of Fine Arts in Film and Media Arts.

### About the Program

The MFA program in Film and Media Arts is designed to prepare socially aware, artistically innovative candidates for professional careers in film, video or digital media. The program is characterized by an openness to all forms of media expression, with an emphasis on independent film and video arising out of both an artistic and social consciousness, taught under the supervision of recognized scholars and professionals in the field. Special attention is paid to the contemporary documentary, the independent narrative, video art and installation, and emerging forms and technologies.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered at convenient times of the day and evening.

**Interdisciplinary Study:** Although graduate students in the Film and Media Arts (FMA) program are expected to complete most of their coursework in the FMA Department, they are encouraged to explore relevant courses in other departments.

**Affiliation(s):** The FMA program is associated with the University Film and Video Association, an international organization of university and industry professionals working in the field of media production.

**Study Abroad:** FMA courses are offered at Temple's satellite campuses in Rome, London and Tokyo where graduate students may choose to complete courses. Graduate students may also choose to complete courses through FMA's Los Angeles Study Away Program.

**Ranking:** The MFA in Film and Media Arts is ranked among the top 10 film/video programs nationally and is one of the top three programs offered by public institutions.

**Areas of Specialization:** The MFA degree program offers concentrations for students to specialize in filmmaking, new media or screenwriting. The concentrations are:

- Cinematic Arts: Narrative and Documentary
- Media Arts
- Screenwriting

**Job Prospects:** The FMA graduate program produces media makers who pursue careers in academia and in the communications and production industries. Many graduates choose to work independently, creating original narrative and documentary films and videos or new media projects.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits within the department at the discretion of individual instructors.

**Financing Opportunities:** Applicants to the MFA program in Film and Media Arts are eligible and nominated for Teaching Assistantship and fellowship awards during the application process. Most students accepted

into the program receive some form of funding, which can be applied to the full 54-credit program at the rate of up to 13 credits per term. The awards include:

- *Four-Term Teaching Assistantship* – FMA departmental awards provide 50% tuition support and a stipend for either terms 1-4 or terms 2-5.
- *Variable Teaching Assistantship* – FMA departmental awards offer partial tuition support and a stipend, both with various values.
- *University Fellowship* – Recipients of the competitive fellowship awards receive 100% support for three years. Fellowship funding is provided by the Graduate School in terms 1, 2, and 6, with departmental support in the form of a Teaching Assistantship offered in terms 3, 4, and 5.
- *Fulbright Support* – FMA accepts international Fulbright Award students, who generally receive 100% tuition and a stipend for three years, with teaching opportunities.

All awards are based on and contingent upon the student maintaining an excellent record of achievement and advancement in the program. Given that the MFA is typically a three-year, six-term program, most students fund their sixth term by teaching as adjunct faculty.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* November 15; October 15 international

Applications are evaluated together after the deadline has passed. Late applications may be considered for admission. To ensure funding consideration, however, applicants must submit an application and all supporting materials by November 15.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty familiar with the applicant's academic competency and/or professionals in the fields of communication or media production.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

*Applicants educated in China* should review the information found on the Graduate School website regarding the submission of education documents to Temple University. See <https://grad.temple.edu/admissions/international-applicants/before-you-apply>. The admissions committee for the Film and Media Arts MFA program will review your materials to determine your admissions status provided the required documentation is submitted in support of your application.

**Statement of Goals:** In approximately 1,000 to 1,500 words, explain your personal interests, educational aims and professional goals, along with relevant biographical information.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S.



institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68
- Duolingo: 105

**Portfolio:** A portfolio is submitted as evidence of creative potential. This usually includes a completed film or videotape accompanied by a cover sheet to explain the applicant's role in the project, including production date, running time, relevant credits, and the conditions and constraints under which it was produced. Other exceptional creative work in writing, art, music, still photography, computer arts, criticism or research scholarship might be appropriate. Such work also may be used to supplement a film or video exhibit. Portfolio materials should be submitted as an online link.

**Resume:** Current resume required.

**Transfer Credit:** The Film and Media Arts MFA program accepts graduate credits completed in coursework related to the program. Acceptance of transfer credits is determined solely by the FMA committee. The maximum number of credits a student may transfer is 11.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 54, with 12-13 required credits and 41-42 concentration-specific credits

Code	Title	Credit Hours
<b>Core Courses</b>		
FMA 5242	Videography	4
FMA 5670	M.F.A. Colloquium (2 terms)	2
FMA 5671	Film Theory Seminar <sup>1</sup>	3
Select one critical studies course from the following:		3-4
FMA 5672	History of Documentary Film	
FMA 5673	Time-Image Arts/Cinema Praxis	
FMA 5676	Anthropological Film/Media	
FMA 5680	Topics in Film Study	
FMA 8462	Documentary Arts and Visual Research	
FMA 8670	Topics in Media Studies	
FMA 8673	Historical Film Research	
FMA 8674	Critical Studies Seminar	
FMA 8675	Seminar: International Film	
FMA 8680	Advanced Topics in Media Arts Studies	
FMA 8870	U Penn Critical Studies	
FMA 9346	Methodologies and Praxis	
<b>Total Credit Hours</b>		<b>12-13</b>

<sup>1</sup>

With permission from the Graduate Program Director, Media Arts students may substitute a graduate-level arts- or media-theory course for FMA 5671.

Additional course requirements for each of the three concentrations are identified in the following course grids:

## Cinematic Arts: Narrative and Documentary

Code	Title	Credit Hours
FMA 5241	Cinematography Workshop	4
FMA 5361	Writing for Media I	4
FMA 9245	Thesis Development Workshop	4
FMA 9246	Thesis Production Workshop	4
Electives <sup>1</sup>		25-26
<b>Total Credit Hours</b>		<b>41-42</b>

<sup>1</sup>

May include up to 6 thesis credits taken with the student's thesis committee chair.

## Media Arts

Code	Title	Credit Hours
FMA 5674	Media Arts Thry-Practice	4
Select one content-design and writing course from the following:		4
FMA 5361	Writing for Media I	
FMA 5462	Video Game Theory and Writing	
FMA 8245	Documentary Workshop	
FMA 8461	Interactive Narrative	
FMA 8462	Documentary Arts and Visual Research	
Select three media arts courses from the following:		12
FMA 5243	Audio Production and Aesthetics	
FMA 5451	Animation Workshop	
FMA 5462	Video Game Theory and Writing	
FMA 8244	Experimental Methods	
FMA 8451	Digital Animation	
FMA 8452	New Technology Laboratory	
FMA 8461	Interactive Narrative	
FMA 8551	Digital Post-Production	
Electives <sup>1</sup>		21-22
<b>Total Credit Hours</b>		<b>41-42</b>

<sup>1</sup>

May include up to 6 thesis credits taken with the student's thesis committee chair.

## Screenwriting

Code	Title	Credit Hours
FMA 5241	Cinematography Workshop	4
FMA 5361	Writing for Media I	4
FMA 8362	Joint Writing Workshop 1	4
FMA 8363	Joint Writing Workshop 2	4
Select one from the following:		4
FMA 5362	Serial Writing	
FMA 8361	Writing for Media II	
Electives <sup>2</sup>		21-22
<b>Total Credit Hours</b>		<b>41-42</b>

1

May include up to 6 thesis credits taken with the student's thesis committee chair.

### **Culminating Events:**

#### *Faculty Reviews:*

At the end of both the first and second years, students formally present their work to the FMA faculty, who review and evaluate students' work and progress in the program.

#### *Comprehensive Examination:*

The MFA program in Film and Media Arts requires a Comprehensive Examination in addition to an MFA thesis. The program is committed to synthesizing theory and practice, allowing students to develop aesthetically and conceptually as makers. The MFA candidate forms a committee of three FMA faculty members (or two FMA faculty and one outside approved member) and works with the committee to design customized areas of inquiry that embody their interests in film studies, media theory or any other field of knowledge relevant to them and their work. Typically, after completing 38 credits of coursework, students write and defend the examination questions, which include two essays and a research-based expanded artist statement.

#### *Thesis Proposal and Defense:*

A thesis is a completed stand-alone work that can be:

- a complete sound, film or video production;
- a feature film script; or
- a completed work in an alternative media form, such as computer-generated media, interactive media, installations or newly emerging technologies.

Students develop their thesis project proposal, treatment and/or script during their fourth semester and form a thesis committee at that time, selecting a thesis chair. The thesis committee may comprise FMA faculty entirely or two FMA faculty and one outside member. The student then proposes an MFA thesis. The MFA thesis committee evaluates project proposals individually for rigor, scope, length and other specific criteria prior to the start of production.

A thesis project must be completed by the date set annually by the School of Theater, Film and Media Arts and Temple University. While it is common and expected for students to develop thesis projects into works for professional public audiences that might entail additional changes after graduation, such as professional color correction, the thesis work must be complete and presentable. Rough versions and drafts with placeholders are not considered complete thesis projects. Upon completion of the MFA thesis, the committee and student hold a public screening or reading of the work.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/film-and-media-arts-mfa-ca-fma-mfa>

### **Department Information:**

Film and Media Arts Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
2001 N. 13th Street, 127 Presser Hall  
Philadelphia, PA 19122-6016

FilmMFA@temple.edu  
215-204-8598  
Fax: 215-204-4957

## **Submission Address for Application Materials:**

<https://apply.temple.edu/TFMA/>

## **Department Contacts:**

#### *Admissions:*

James Short  
Recruitment Coordinator  
jshort@temple.edu

#### *Graduate Program Director:*

Sarah Drury  
sdrury@temple.edu

#### *Chair:*

Chet Pancake  
chet.pancake@temple.edu

## **mediaXarts: Cinema for New Technologies and Environments MA**

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER, FILM AND MEDIA ARTS

Learn more about the Master of Arts in mediaXarts: Cinema for New Technologies and Environments.

## **About the Program**

The one-year, 30-credit master's program in mediaXarts: Cinema for New Technologies and Environments prepares students for professions in the creative design industries, interaction design for public organizations, and emergent cinematic art forms, including interactive cinema, projection design, media installation, user experience design, design for mobile media, net art and social media. The mediaXarts MA program interfaces with the full range of Media Arts BFA, MA and MFA curricula at Temple University, which are among the leading programs for interdisciplinary, alternative and emerging media arts. The mediaXarts program trains artists who seek to challenge cinematic and arts conventions through narrative, non-narrative and hybrid forms, including interactive installation, projection design for performance and architecture, mobile media app design, digital animation, game design, interactive fabrication and new media studies. The curriculum engages the exciting interdisciplinary contexts of Temple's Center for the Performing and Cinematic Arts and Philadelphia's thriving arts scene.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered at convenient times of the day and evening.

**Interdisciplinary Study:** The degree program allows media artists to:

- engage in interdisciplinary art practices through collaborations across cinematic fields, theater, fine arts, humanities, the sciences

and visual research within Boyer College of Music and Dance and the School of Theater, Film and Media Arts in the Center for the Performing and Cinematic Arts, Tyler School of Art and Architecture, and other programs within the University;

- bridge analog and digital forms, from optical-printing and hand-painted film to projection design, mobile media, interactive cinema, physical computing, analog/digital animation and installation arts; and
- develop collaboration skills across the fields of media production, digital media arts, performing arts and fine arts through curricular programs in the Center for the Performing and Cinematic Arts. With permission, students may also take courses at the Tyler School of Art and Architecture.

**Affiliations:** Media artists work with Film and Media Arts faculty, who are leading artists making works for museums, public spaces, interactive cinema, mobile media, gallery installation, performance, projection and the Web. Our mediaXarts students also work within Philadelphia's vibrant art scene and local communities as well as through national and international networks.

**Study Abroad:** Media artists have opportunities for study-away experiences in Los Angeles, Tokyo and Venice. Study-away experiences have to be balanced with the degree requirements of the program.

**Ranking:** Temple's Film and Media Arts graduate programs are ranked among the top 10 film/video programs nationally and within the top three programs offered by public institutions.

**Areas of Specialization:** The faculty are international leaders with awards from Fulbright, Guggenheim, the National Endowment for the Arts (NEA), the National Endowment for the Humanities (NEH), Pew, and Rockefeller, as well as major film, art and publication credits. Faculty members specialize and offer coursework in:

- Digital Animation (2D and 3D)
- Digital Ethnography and New Documentary Forms
- Game, App and Interactive Design
- Installation and Multi-Platform Design
- Media Production and Post-Production
- Physical Computing
- Projection Design for Theater, Performance and Architecture
- Writing for Media

**Job Prospects:** Media artists go on to careers across the creative industries, culture and education. For example, the MFA program in Film and Media Arts has produced more Princess Grace and Eastman Scholar Award winners than any other school in recent decades.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits within the department at the discretion of individual instructors.

**Financing Opportunities:** Contact the department directly for more information.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1

Applications are evaluated together after the deadline has passed. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 3*

*From Whom:* Letters of recommendation should be obtained from college/university faculty familiar with the applicant's academic competency and/or professionals in the fields of communication or media production.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

*Applicants educated in China* should review the information found on the Graduate School website regarding the submission of education documents to Temple University. See <https://grad.temple.edu/admissions/international-applicants/before-you-apply>. The admissions committee for the Film and Media Arts MFA program will review your materials to determine your admissions status provided the required documentation is submitted in support of your application.

**Statement of Goals:** In approximately 500 words, explain your personal interests, educational aims and professional goals, along with relevant biographical information.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Portfolio:** A portfolio, with your role in each work clearly indicated, is submitted as evidence of creative potential. The works can include film, video, animation, visual art, examples of design, interactive work or other media art forms, as well as writing, art, music, still photography, computer arts, criticism or research scholarship, if appropriate.

**Resume:** Current resume required.

**Transfer Credit:** The mediaXarts MA program accepts graduate credits completed in coursework related to the program. Acceptance of transfer credits is determined solely by the Film and Media Arts committee. The maximum number of credits a student may transfer is 3.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
FMA 5242	Videography	4
FMA 5468	Art-Culture-Technology Seminar	4

FMA 5674	Media Arts Thry-Practice	4
<b>Electives</b>		
Three courses in Film and Media Arts <sup>1</sup>		12
Two in Film and Media Arts or Outside the Department		6
<b>Total Credit Hours</b>		<b>30</b>

1

Students customize their course of study after completion of all required courses.

#### **Culminating Event:**

##### *End-of-Year Review:*

Student work is evaluated by the Film and Media Arts faculty near the end of the year in a closed individual session. Each student is asked to present their completed work and work in progress, along with an artistic statement that indicates future direction. Student participation in the End-of-Year Review is mandatory.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/mediaxarts-cinema-for-new-technologies-and-environments-ma-ca-mxar-ma>

### **Department Information:**

Film and Media Arts Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
2001 N. 13th Street, 127 Presser Hall  
Philadelphia, PA 19122-6016  
FilmMFA@temple.edu  
215-204-8598  
Fax: 215-204-4957

### **Submission Address for Application Materials:**

<https://apply.temple.edu/TFMA/>

### **Department Contacts:**

#### *Admissions:*

James Short  
Recruitment Coordinator  
jshort@temple.edu

#### *MA Program Co-Directors:*

Roderick Coover  
rcoover@temple.edu

Sarah Drury  
sdrury@temple.edu

#### *Chair:*

Chet Pancake  
chet.pancake@temple.edu

## **Musical Theater Collaboration MFA**

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER,  
FILM AND MEDIA ARTS

Learn more about the Master of Fine Arts in Musical Theater Collaboration.

### **About the Program**

The George Abbott Master of Fine Arts in Musical Theater Collaboration is designed to prepare candidates for a career in the musical theater industry as collaborating creative team members and as independent artists engaged in the creation of new musical theater works for the commercial and nonprofit sectors, as well as educational programs. The program emphasizes intensive graduate-level craft-based training that includes abundant studio, workshop and production experience opportunities. Rather than the usual isolated pedagogical separation of the various craft and artistic disciplines within the field, the program places primary emphasis on the inherent collaborative nature of this most integrated of performing art forms.

The innovative degree in Musical Theater Collaboration is the only MFA graduate training program in the nation designed to collectively train, mentor and develop new book writers, choreographers, composers, directors, lyricists and playwrights together as a cohort in a comprehensive collaborative program. The broad scope of the program includes a comprehensive overview and history of the field, a deep understanding of the aesthetics of the form, as well as knowledge of the business side of the industry. The program seeks to mirror the actual field-based creative process of generating new musical theater works by teaching fundamental craft and collaboration skills within a world of access to the necessary mentoring and talent resources vital to the process of creating a new musical.

The three-year curriculum includes:

- In Year 1, a focus primarily on building creative collaboration skills in concert with studies based in students' respective disciplinary areas of emphasis.
- In Year 2, a continuation of disciplinary studies and division of the cohort into groups of collaborative teams focused on the creation of new musical theater thesis pieces.
- In Year 3, a focus on bringing thesis projects to fruition, culminating in a fully realized workshop production. The productions are presented in New York City in an industry showcase of excerpts of students' work for consideration by an invited roster of field and industry professionals.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program as part of a cohort on a full-time basis.

**Interdisciplinary Study:** The program is interdisciplinary in nature, given that book writers and playwrights, composers and composer/lyricists, and directors and director/choreographers learn and create together.

**Accreditation:** The Theater Department is accredited by the National Association of Schools of Theatre (NAST).

**Areas of Specialization:** Within the cohort, students concentrate in one of three areas:

- Bookwriting
- Composing/Lyricist
- Directing

**Job Prospects:** The program prepares candidates for careers in the musical theater industry or academy as collaborating creative team members and as independent artists engaged in the creation of new musical theater works.

**Non-Matriculated Student Policy:** Coursework may not be taken on a non-matriculated basis.

**Financing Opportunities:** Lab, studio and classroom teaching opportunities are available for Teaching Assistants. Duties include assisting in grading papers for survey and literature classes. Assistantships carry a stipend and full tuition remission. Academic Internships are also available in production work, including rehearsal and performance of plays for the theater season.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* February 1, 2025

**\*\* APPLICATIONS will next be accepted for FALL 2025 ADMISSION \*\***

Applications are accepted from applicants through the University/Resident Theatre Association (URTA) audition/interview process as well as local auditions in Philadelphia. Auditions are held every three years (e.g., 2025, 2028, 2031). We visit all three sites: New York City, Chicago and San Francisco. We also recruit through the Stage Directors and Choreographers Society (SDC) and with several prominent musical theater development companies such as the National Alliance for Musical Theatre (NAMT). After candidates have auditioned and been interviewed, those accepted are notified by letter on or before April 15. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required: 3*

*From Whom:* Letters of recommendation should be obtained from college/university professors and/or professionals in the field who are familiar with the applicant's work.

**Coursework Required for Admission Consideration:** Applicants must have completed a bachelor's degree or equivalent and ideally have professional experience in their discipline.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the baccalaureate degree at Temple University.

**Statement of Goals:** Introduce yourself in approximately 500 words by relaying your relevant experience, values and areas of interest. Proper essay form should be used, but it may be in a personal style.

**Standardized Test Scores:** No standardized test is used for admission to the MFA in Musical Theater Collaboration program.

**Resume:** Current resume required.

**Interview:** Interviews are generally conducted in March and April through URTA, with audition sites in New York, Chicago and San Francisco, as well as locally on the Temple University campus. Applicants called back for an interview are required to bring transcripts, a headshot and a resume.

### Other Requirements:

- **Bookwriting:** Via Acceptd, submit a writing sample that is either one full-length manuscript or two one-act scripts.
- **Composing/Lyricist:** Via Acceptd, submit samples of creative work, portfolio, reviews and/or website.
- **Directing:** Via Acceptd, submit a reel of creative work, production photos, reviews and/or website.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 60*

### Required Courses:

In Year 1, foundation coursework is taken. In Year 2, thesis project teams are formed and collaboration begins. In Year 3, the thesis projects are completed, presented and showcased for industry.

All students enrolled in a cohort of the Musical Theater Collaboration MFA program take the following core courses together:

Code	Title	Credit Hours
THTR 5012	American Musical Theater	2
THTR 5287	Rehearsal/Performance	2
THTR 5392	The Business of the Business in Theater	2
THTR 5804	Dramaturgy	2
THTR 5873	Adaptation <sup>1</sup>	1-2
THTR 5892	Script and Score Analysis	2
THTR 8001	Seminar in Dramatic Literature	2
THTR 8002	Seminar in Dramatic Literature	2
THTR 8985	Teach in Higher Education	3
THTR 9487	Musical Theater Practicum III	1
THTR 9587	Musical Theater Practicum IV <sup>2</sup>	2-3
THTR 9995	Thesis	6
General Electives <sup>3</sup>		12
<b>Total Credit Hours</b>		<b>39-41</b>

**1**

Students in the Bookwriting concentration take THTR 5873 for 1 credit; students in the Composing/Lyricist and Directing concentrations take this course for 2 credits.

**2**

Students in the Directing concentration take THTR 9587 for 2 credits; students in the Bookwriting and Composing/Lyricist concentrations take this course for 3 credits.

3

Consult with the program director to ensure selection of appropriate electives.

The balance of coursework annually is taken by students in their respective areas of concentration:

## Bookwriting Concentration

Code	Title	Credit Hours
THTR 5487	Musical Theater Practicum I	1
THTR 5587	Musical Theater Practicum II	1
THTR 5871	Playwriting I	1
THTR 5872	Playwriting II	2
THTR 5893	Lyric Seminar I	3
THTR 5894	Lyric Seminar II	4
THTR 8881	Playwriting III	2
THTR 8882	Playwriting IV	2
THTR 9882	Projects in Playwriting	2
Select one Design Area course from the following:		2
THTR 5613	History of Decor	
THTR 5625	History of Fashion	
THTR 5741	Design for TV and Film	
THTR 8511	Lighting Design II	
THTR 8611	Costume Design II	
THTR 8711	Scene Design II	
<b>Total Credit Hours</b>		<b>20</b>

## Composing/Lyricist Concentration

Code	Title	Credit Hours
MUST 8715	Composition I	3
MUST 8717	Composition II	4
THTR 5487	Musical Theater Practicum I	1
THTR 5587	Musical Theater Practicum II	1
THTR 5893	Lyric Seminar I	3
THTR 5894	Lyric Seminar II	4
General Elective <sup>1</sup>		3
<b>Total Credit Hours</b>		<b>19</b>

1

Consult with the program director to ensure selection of an appropriate elective.

## Directing Concentration

Code	Title	Credit Hours
THTR 5134	Directing for the Musical Stage	4
THTR 5387	Directing Practicum I	2
THTR 5388	Directing Practicum II	3
THTR 9382	Projects in Directing I	2
THTR 9387	Directing Practicum III	2
Select one Design Area course from the following or a general elective: <sup>1</sup>		3

THTR 5613 History of Decor

THTR 5625 History of Fashion

THTR 5741 Design for TV and Film

THTR 8511 Lighting Design II

THTR 8611 Costume Design II

THTR 8711 Scene Design II

General Elective

Film Course<sup>2</sup> 4**Total Credit Hours 20**

1

Consult with the program director in choosing an elective if a Design Area course is not selected.

2

Consult with the program director to ensure selection of an appropriate film course.

### Culminating Events:

#### Thesis Project:

The cohort creates a complete new musical culminating in a fully rehearsed workshop production. It is written by MFA candidate book writers and composers/lyricists, with subsequent direction by MFA candidate directors.

#### Showcase:

An industry showcase of students' selected work is presented in New York City to an invited roster of industry and field professionals. Funded in part by the George and Joy Abbott Center for Musical Theater at Temple University, the showcase consists of a short concert-style presentation featuring selected performed excerpts from the candidates' body of original work.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/musical-theater-collaboration-mfa-ca-mtc-mfa>

### Department Information:

Musical Theater Collaboration Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
2001 N. 13th Street, 127 Presser Hall  
Philadelphia, PA 19122-6016  
tfma@temple.edu  
215-204-8598  
Fax: 215-204-4957

### Submission Address for Application Materials:

<https://apply.temple.edu/TFMA/>

### Department Contacts:

#### Admissions:

James Short  
Recruitment Coordinator  
jshort@temple.edu

Head of Musical Theater:

Peter Reynolds  
peterr@temple.edu

*Chair:*  
Fred Duer  
fmduer@temple.edu

## Theater/Acting MFA

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER,  
FILM AND MEDIA ARTS

Learn more about the Master of Fine Arts in Theater/Acting.

### About the Program

The MFA program in Theater/Acting provides holistic actor training modeled after the conservatory approach. We are interested in actors with professional resumes who are willing to commit to a three-year regimen of study and performance. A twofold objective guides the graduate Acting program: assist professional actors in breaking through patterns or habits that have been holding back artistic growth; and develop a method for training that enables actors to effectively articulate the process to the student.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered at convenient times of the day and evening.

**Interdisciplinary Study:** Students are able to take some coursework with graduate students in Film and Media Arts and may participate, on a voluntary basis, in independent films directed by graduate and undergraduate directors in Film and Media Arts.

**Affiliation(s):** Temple theater students have the opportunity to intern with many of the numerous professional theaters in Philadelphia, including the Arden Theatre Company, Philadelphia Theatre Company, the Walnut Street Theatre, and The Wilma Theater.

**Accreditation:** The Theater Department is accredited by the National Association of Schools of Theatre (NAST).

**Areas of Specialization:** The actor is offered a well-rounded acting curriculum in addition to pedagogical training in teaching in higher education.

**Job Prospects:** The program is primarily focused on training working mid-career professionals in the theater industry. Many of our graduates are working in television, film, regional theater, off-Broadway and Broadway and as instructors and professors in higher education.

**Non-Matriculated Student Policy:** Coursework may not be taken on a non-matriculated basis.

**Financing Opportunities:** Lab, studio and classroom teaching opportunities are available for Teaching Assistants. Duties include assisting in grading papers for survey and literature classes. Assistantships carry a stipend and full tuition remission. Academic Internships are also available in production work, including rehearsal and performance of plays for the theater season.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1, 2025

**\*\* APPLICATIONS will next be accepted for FALL 2025 ADMISSION \*\***

Applications are accepted from applicants through the University/ Resident Theatre Association (URTA) audition/interview process as well as local auditions in Philadelphia. Auditions are held every three years (e.g., 2025, 2028, 2031). We visit all three sites: New York City, Chicago and San Francisco. After candidates have auditioned and been interviewed through the URTA process or here locally, those accepted are notified by letter on or before April 15.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university professors and/or professionals in the field who are familiar with the applicant's work.

**Coursework Required for Admission Consideration:** Applicants must have completed a bachelor's degree or equivalent and ideally have considerable professional experience as working actors.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the baccalaureate degree at Temple University.

**Statement of Goals:** Introduce yourself in approximately 500 words by relaying your relevant experience, values and areas of interest. Proper essay form should be used, but it may be in a personal style.

**Standardized Test Scores:** No standardized test is used for admission to the MFA Acting program.

**Audition:** We audition through URTA with audition sites in New York, Chicago and San Francisco and locally on the Temple University campus.

**Resume:** Current resume required.

**Interview:** In addition to the audition, applicants who are called back for an interview are required to bring transcripts, a headshot and a resume. Interviews are generally held in February and March.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 60

*Required Courses:*

Code	Title	Credit Hours
THTR 5211	Speech for the Actor I	
THTR 5212	Speech for the Actor II	
THTR 5221	Acting I	
THTR 5222	Acting II	
THTR 5231	Vocal Production for the Actor I	

THTR 5232	Vocal Production for the Actor II
THTR 5241	Dance for the Actor I
THTR 5242	Dance for the Actor II
THTR 5287	Rehearsal/Performance
THTR 8001	Seminar in Dramatic Literature
THTR 8002	Seminar in Dramatic Literature
THTR 8211	Speech for the Actor III
THTR 8212	Speech for the Actor IV
THTR 8221	Acting III
THTR 8222	Acting IV
THTR 8231	Vocal Production for the Actor III
THTR 8232	Vocal Production for the Actor IV
THTR 8241	Dance for the Actor III
THTR 8242	Dance for the Actor IV
THTR 8985	Teach in Higher Education
THTR 9087	Graduate Ensemble Practicum
THTR 9211	Speech for the Actor V
THTR 9221	Acting V
THTR 9222	Acting VI
THTR 9231	Vocal Production for the Actor V
THTR 9232	Vocal Production for the Actor VI
THTR 9241	Dance for the Actor V
THTR 9251	Acting for the Camera
THTR 9283	Projects in Acting

**Culminating Events:** Completion of the degree is predicated on successfully completing required coursework and maintaining collegial relationships with faculty and fellow students. No formal thesis or other culminating event is required.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/theater-acting-mfa-ca-thac-mfa>

### Department Information:

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Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
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### Submission Address for Application Materials:

<https://apply.temple.edu/TFMA/>

### Department Contacts:

*Admissions:*  
James Short  
Recruitment Coordinator  
jshort@temple.edu

#### *Head of Graduate Acting:*

Lynne Innerst  
innerst@temple.edu

#### *Chair:*

Fred Duer  
fmduer@temple.edu

## Theater/Design MFA

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER, FILM AND MEDIA ARTS

Learn more about the Master of Fine Arts in Theater/Design.

### About the Program

The Theater/Design MFA program offers a professional training curriculum wherein MFA designers and technicians collaborate with professional faculty, staff and guest artists to stage exciting contemporary theater for diverse audiences. We are looking for aspiring designers who will pursue the intent of the play wherever it leads them, into any period or style, into any emotion or state of mind, and whose knowledge and skills are so various that they bring a rich theatricality to the worlds they create. The Design program for Theater combines intensive classroom work with full-scale productions to create well-rounded designers and technicians. Our graduates find work in many aspects of theater, including regional theater, educational theater and the entertainment industry.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered at convenient times of the day and evening.

**Interdisciplinary Study:** Design students are encouraged to explore other fields of study, such as art history, cinematography and photography, as their course of study allows.

**Affiliation(s):** The Theater Department has informal affiliations with The Freedom Theatre, The Lighting Practice, and Philadelphia Theatre Company. With special permission from their advisors, students have the opportunity to intern at these and other professional theaters and production companies in the greater Philadelphia area. The Theater Department is a member of the Association for Theatre in Higher Education (ATHE), National Association of Schools of Theatre (NAST), University/Resident Theatre Association (URTA), and the United States Institute for Theatre Technology (USITT).

**Accreditation:** The Theater Department is accredited by the National Association of Schools of Theatre (NAST).

**Areas of Specialization:** Each student, in consultation with the faculty, develop their own program of study based on individual interests and talent. Full-time faculty members are available for mentoring. Students may specialize in one or more of the following areas:

- Costume Design
- Lighting Design
- Scenic Design

**Job Prospects:** The program is primarily focused on training students for careers in the theater industry. Graduates of the Theater/Design



program find employment in regional theater, higher education and the entertainment industries.

**Non-Matriculated Student Policy:** Along with all university approvals, non-matriculated students are required to obtain written approval from the instructor for each class they want to take.

**Financing Opportunities:** Assistantships carry a stipend for working 20 hours per week in the shop of a student's respective design discipline and full-tuition remission. Lab, studio and classroom teaching opportunities are available.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

Applications are processed on a semi-rolling basis throughout the Spring.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university professors and professionals in the field who are familiar with the applicant's work.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Portfolio:** A portfolio is required of all applicants. The portfolio should contain examples of work, ranging from design projects, classroom exercises and fine art to realized designs. The portfolio should include the complete process for at least one show, including script analysis, concept statement, research materials, sketches, renderings, models, appropriate paperwork and production photography, if applicable.

**Resume:** Current resume required.

**Interview:** An interview is required of all applicants, and a campus visit is highly recommended. An interview can be held on campus or during the University/Resident Theatre Association (URTA) National Unified Interviews in Chicago at the end of January of the preceding academic year. Candidates are not required to interview through the URTA process, but are strongly encouraged to do so. Please see the URTA website, found at <https://www.urtacom/>, for more information. The deadline for participation in the URTA interview process is the middle of November of the preceding academic year.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 60

The Theater/Design MFA curriculum follows a three-year cycle. Specific course order is based on when a student starts their program.

### Required Courses:

Code	Title	Credit Hours
	Seminar in Dramatic Literature	
	Scenic Design	
	Costume Design	
	Lighting Design	
	Design for TV and Film	
	History of Decor	
	History of Fashion	
	Drawing and Rendering Techniques	
	Draping and Flat Pattern Drafting	
	Costume Crafts	
	Theatrical Model Making	
	Scene Painting	
	Projection and Media Design	
	The Job Market	

### Additional Requirements:

As a component of the three-year MFA degree program, all Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This work is an extension of what is presented in the classroom and becomes the experiential component to the degree program. Coursework and production work are equally balanced throughout the academic year, both philosophically and pedagogically.

All Design students must participate in a portfolio review and faculty evaluation at the end of each semester.

### Culminating Event:

#### *Thesis:*

The master's thesis is typically a realized and produced production executed by the Theater Department as part of its main stage season. The underlying premise is to create and produce a professional design within a professional production. Along with gathering all research and creating all designs, drafts, renderings, models and appropriate paperwork for the design, fulfilling a written thesis component completes the degree process. The thesis production and document are defended before a faculty committee and then digitally published through Temple University.

In some cases, where appropriate, a "paper" thesis may be assigned. In this case, the candidate completes all the same research, designs, drafts, renderings, models and a written document defending the design and the process, but the design will neither be realized nor produced.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/theater-design-mfa-ca-thds-mfa>

## Department Information:

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## Submission Address for Application Materials:

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## Department Contacts:

### Admissions:

James Short  
Recruitment Coordinator  
jshort@temple.edu

### Head of Graduate Design:

Fred Duer  
Scenic Design  
fmduer@temple.edu

### Costume Design Area Head:

Marie Anne Chiment  
chiment@temple.edu

### Chair:

Fred Duer  
fmduer@temple.edu

## Theater/Directing MFA

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER, FILM AND MEDIA ARTS

Learn more about the Master of Fine Arts in Theater/Directing.

## About the Program

The focus of the MFA program in Theater/Directing is to develop the directing student as a visionary creative communicator and artistic leader. Directing students are trained to be fully capable of illuminating a text through the exploration of character in collaboration with the writer, actors and design/production team and of delivering a compelling and unified theatrical storytelling event to the audience.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** Students can take coursework in film with graduate students in Film and Media Arts.

**Affiliation(s):** Temple theater students have the opportunity to intern with many of the numerous professional theaters in Philadelphia, including the Arden Theatre Company, Lantern Theater Company, Philadelphia Theatre Company, Prince Theater, and The Wilma Theater.

**Accreditation:** The Theater Department is accredited by the National Association of Schools of Theatre (NAST) and is a founding member of the University/Resident Theatre Association (URTA).

**Areas of Specialization:** The goal of the program is to develop the director as a master "storyteller." Students focus on learning, through the study of craft-based pedagogy, about the director's primary commitment to the illumination of text for an audience through the work of the actor; through design, staging, thematic and theatrical interpretation; and through artistic/team collaboration and leadership.

**Job Prospects:** The program is primarily focused on training students for careers in professional theater.

**Non-Matriculated Student Policy:** Coursework may not be taken on a non-matriculated basis.

**Financing Opportunities:** Based on the number of assistantships allocated to the program, three-year Teaching Assistantships are awarded to students upon acceptance into the program. The award provides both a stipend and either full or half tuition remission. Fellowships are occasionally awarded to exceptionally qualified, eligible students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1, 2025

**\*\* APPLICATIONS will next be accepted for FALL 2025 ADMISSION \*\***

The MFA Directing program recruits applicants through the National Unified Auditions and Interviews (NUAIs) conducted by University/Resident Theatre Association (URTA) in New York and Chicago. We currently recruit a minimum of two candidates every three years. The next class will be admitted for Fall 2025. Those interested in our program are strongly encouraged to apply at <https://urta.com/> when appropriate. Applications are thoroughly screened, and top candidates are invited to interview at one of the URTA audition sites or at Temple University. After all candidates have been interviewed, those accepted are notified by letter by April 15. Candidates unable to interview as part of the NUAIs should adhere to the criteria listed below.

All candidates must also complete the formal Temple University Graduate School application. *APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university professors and professionals in the field who are familiar with the applicant's work.

**Coursework Required for Admission Consideration:** Coursework in Theater, typically completed as part of an undergraduate major in Theater, is required.

**Bachelor's Degree in Discipline/Related Discipline:** The BA in Theater or BFA degree in Acting, Design or Directing is preferred.

**Statement of Goals:** Introduce yourself in approximately 500 words by relaying your relevant experience, values and areas of interest. Proper essay form should be used, but it may be in a personal style.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Interview:** The applicant meets with appropriate faculty, either through URTA at audition sites in New York and Chicago or on Temple University's Main Campus.

**Other:** In addition to a baccalaureate degree, applicants must have a body of professional or semi-professional experience in Directing.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 60

*Required Courses:*

Code	Title	Credit Hours
THTR 5387	Directing Practicum I	2
THTR 5388	Directing Practicum II	3
THTR 5392	The Business of the Business in Theater	2
THTR 5804	Dramaturgy	2
THTR 8001	Seminar in Dramatic Literature	2
THTR 8002	Seminar in Dramatic Literature	2
THTR 8985	Teach in Higher Education	3
THTR 9251	Acting for the Camera	2
THTR 9382	Projects in Directing I (5 terms)	12
THTR 9387	Directing Practicum III	2
THTR 9388	Directing Practicum IV	2
THTR 9995	Thesis	6
Select one Design Area course from the following:		2
THTR 5613	History of Decor	
THTR 5625	History of Fashion	
THTR 5741	Design for TV and Film	
THTR 8511	Lighting Design II	
THTR 8611	Costume Design II	
THTR 8711	Scene Design II	
Select one Theater course from the following:		2
THTR 5212	Speech for the Actor II	
THTR 5232	Vocal Production for the Actor II	
THTR 5242	Dance for the Actor II	
THTR 8231	Vocal Production for the Actor III	
THTR 8232	Vocal Production for the Actor IV	
THTR 8241	Dance for the Actor III	
THTR 8242	Dance for the Actor IV	
Film Course <sup>1</sup>		4

General Electives <sup>2</sup>	12
<b>Total Credit Hours</b>	<b>60</b>

1

Consult with the program director to ensure selection of an appropriate film course.

2

Consult with the program director to ensure selection of appropriate electives.

**Additional Requirements:**

*First Year:*

Students direct scenes plus a one-act play in the studio theater and serve as assistant to the director of a main stage show.

*Second Year:*

Scene work continues. Students also direct two unsupported projects in the studio theater.

*Third Year:*

Students direct a thesis production. This is a fully supported production that is part of the main stage season. During the alternate term, an opportunity may exist for an internship to assist or direct in one of the professional theaters in the Philadelphia area. This choice requires faculty approval. An additional option is an unsupported project to allow the student to explore personal interest or career objectives in theater.

*Practical Application (in addition to coursework):*

First Year/Fall Term: Practical focus is on the short scene (5-10 minutes). Three scenes are presented to the department with a focus primarily on contemporary realism.

First Year/Spring Term: Continued practical focus is on directing scenes from acknowledged 20th-century classics.

Second Year/Fall Term: Practical focus is on Shakespeare, culminating in the presentation of a Shakespeare scene project.

Second Year/Spring Term: Practical focus is on scene work from a variety of non-realistic genres and styles, including the study of comedy.

Second Year: Potential opportunity exists to direct a minimally supported full-length production during one of the terms.

Third Year/Fall Term: Practical focus is on new work, including self-created ensemble-based work.

Third Year/Spring Term: Practical focus is on the serial television project as well as musical theater.

**Culminating Event:**

*Thesis:*

One fully supported thesis project is produced in the main season during the third year. This is accompanied by a detailed, comprehensive written thesis, which includes an account of the research and script analysis that preceded the rehearsal process, a director's rehearsal log, and the student's evaluation of the production. The student meets with appropriate faculty after the production has closed for discussion and evaluation of both the process and the production. Faculty members look systematically at all aspects of the theater production and evaluate the student in terms of what was attempted and what was achieved. Theatrical concept, unity of design and stylistic approach, the visual and

aural components of storytelling, and ensemble work of the actors are evaluated from the point of view of directing, acting and design.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/theater-directing-mfa-ca-thdi-mfa>

### Department Information:

Theater Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts

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### Submission Address for Application Materials:

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### Department Contacts:

*Admissions:*

James Short

Recruitment Coordinator

[jshort@temple.edu](mailto:jshort@temple.edu)

*Chair:*

Fred Duer

[fmduer@temple.edu](mailto:fmduer@temple.edu)

## Theater/Playwriting MFA

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER, FILM AND MEDIA ARTS

Learn more about the Master of Fine Arts in Theater/Playwriting.

### About the Program

The Theater/Playwriting MFA program is dedicated to developing each writer's unique voice and equipping the writer with skills necessary to sustain life as an artist. Core coursework provides rigorous training with attention to craft in a range of forms. Additional courses emphasize the collaborative nature of theater-making and provide an environment for creating a network of fellow artists from across disciplines. The curriculum is designed to allow writers to explore areas of interest both within the School of Theater, Film and Media Arts, and outside of it, including research in areas such as African American Studies, Anthropology, Art History, Music or Women's Studies in augmentation of a particular project or idea. Class sizes are small, with individualized instruction as a priority.

Our interest is in training playwrights for artistic success in both current and potential future landscapes. We seek students who are motivated by a desire for passionate self-expression and a sense of social purpose. The program sits within the context of our highly regarded acting, design and directing programs and the vibrant, diverse theater community of Philadelphia.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main, Center City

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered at convenient times of the day and evening.

**Interdisciplinary Study:** Research areas are encouraged. Previous areas of interest have included African American studies, anthropology, film, mass media, new media and women's studies. Permission to enroll in particular courses is determined by the department involved.

**Affiliation(s):** Contacts are maintained with professional theaters with new play programs.

**Study Abroad:** No formal relationships exist, but study abroad programs in the Low Klein College of Media and Communication are available. London and Dublin programs include theater visits and can include courses or internships.

**Accreditation:** The Theater Department is accredited by the National Association of Schools of Theatre (NAST).

**Areas of Specialization:** Areas of specialization can be developed through graduate study in any of the research areas. Particularly relevant are courses in film or television writing.

**Job Prospects:** The program is primarily focused on training our students for careers in the theater industry.

**Non-Matriculated Student Policy:** Along with all university approvals, non-matriculated students are required to obtain written approval from the instructor for each class they want to take.

**Financing Opportunities:** Assistantships, including tuition remission and a stipend, may be available for exceptional candidates.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 15, 2025

**\*\* APPLICATIONS will next be accepted for FALL 2025 ADMISSION \*\***

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From whom:* Letters of recommendation should be obtained from college/university professors and/or professionals in the field who are familiar with the applicant's work.

**Coursework Required for Admission Consideration:** Particular coursework is not required, but evidence of playwriting experience and commitment to theater writing are required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** Introduce yourself in approximately 500 words by relaying your relevant experience, values and areas of interest. Proper essay form should be used, but it may be in a personal style.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Resume:** Current resume required.

**Interview:** The applicant meets with the Head of Playwriting.

**Writing Sample:** One full-length script or two one-acts are required for admissions consideration.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 60*

*Required Courses:*

Code	Title	Credit Hours
THTR 5392	The Business of the Business in Theater	2
THTR 5804	Dramaturgy	2
THTR 5871	Playwriting I	1
THTR 5872	Playwriting II	2
THTR 5873	Adaptation	1
THTR 5874	Docudrama	3
THTR 8001	Seminar in Dramatic Literature	2
THTR 8002	Seminar in Dramatic Literature	2
THTR 8881	Playwriting III	2
THTR 8882	Playwriting IV	2
THTR 8883	Teaching Playwriting	3
THTR 8985	Teach in Higher Education	3
THTR 9882	Projects in Playwriting (5 terms)	10
THTR 9991	Research	2
THTR 9995	Thesis	8
Select one Design Area course from the following or a general elective: <sup>1</sup>		3
THTR 5613	History of Decor	
THTR 5625	History of Fashion	
THTR 5741	Design for TV and Film	
THTR 8511	Lighting Design II	
THTR 8611	Costume Design II	
THTR 8711	Scene Design II	
General Elective		
General Electives <sup>2</sup>		12
<b>Total Credit Hours</b>		<b>60</b>

<sup>1</sup>

Consult with the program director in choosing an elective if a Design Area course is not selected.

2

Consult with the program director to ensure selection of appropriate electives.

**Additional Requirement:**

Reviews are held after each term. Each review considers all work done, progress made, and future plans.

**Culminating Event:**

*Thesis:*

A full-length play is required.

## Contacts

**Program Web Address:**

<https://www.temple.edu/academics/degree-programs/theater-playwriting-mfa-ca-thpw-mfa>

**Department Information:**

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*Chair:*

Fred Duer

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## Theater Instruction MA

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER, FILM AND MEDIA ARTS

Learn more about the Master of Arts in Theater Instruction.

**About the Program**

The Master of Arts in Theater Instruction provides opportunities for students to explore ideas and concepts using drama strategies and theater forms in the classroom and, most importantly, how to translate the student's learning back into their own classroom. Students learn how to demonstrate understanding of all areas of theater performance — acting, design/tech, directing, history, musical theater, production and management, and more — and how to best present this information to their own Kindergarten to grade 12 classrooms.

The MA in Theater Instruction is designed for existing teachers with certification in any subject who want to add the Theatre Endorsement from the Pennsylvania Department of Education while earning a master's degree in Education that will further their effectiveness in the classroom. It is also designed for current endorsement holders or those who have been teaching drama in schools but need new or remedial training in all areas of live theater production.

The program consists of a mix of subjects to provide the student with a well-rounded theater degree. This allows existing teachers to return to the classroom with a wealth of knowledge for their own students. All classes are taught from the perspective of teaching theater teachers how best to teach theater. Coursework integrates theory and reflective practice, offering the student the opportunity to develop skills and expand knowledge in the art of theater, the principles of teaching and learning in the arts, and the practices of applied drama and theater.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The MA program features online, hybrid, on-campus and practical fieldwork. The program is offered in a hybrid format with some in-person instruction/meetings and some online learning/instruction. Fall and Spring terms are mostly hybrid or online, while two Summer II sessions are intensives on campus. By the nature of the schedule, this program is tailored for working teachers or those interested in teaching in the performing arts.

**Interdisciplinary Study:** By its very nature, the program is interdisciplinary. The curriculum interweaves all elements of theater study.

**Accreditation:** The Theater Department is accredited by the National Association of Schools of Theatre (NAST).

**Job Prospects:** The degree serves to elevate the stature of current teachers in their schools as they bring deeper knowledge of teaching theater and its various elements to the K-12 classroom. It increases the marketability of those with certification in another subject area.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits within the department at the discretion of individual instructors.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1  
*Spring:* November 1  
*Summer II:* June 1

Applications are evaluated as they are received. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators, such as a school principal, department chair or college/university faculty, who can provide insight into the applicant's aptitude for graduate study.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree, but it need not be in a theater-related field.

**Statement of Goals:** In approximately 500 words, explain your personal interests, educational aims and professional goals, along with relevant biographical information.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68

**Resume:** Current resume required.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Year 1		
Summer II		Credit Hours
THTR 8101	Stagecraft for Teachers	3
THTR 8102	Acting 1 for Teachers	3
THTR 8103	Introduction to the Director's Art for Teachers	3
<b>Credit Hours</b>		<b>9</b>
Fall		
THTR 8104	Methods of Teaching Theater for Teachers	3
THTR 8105	Stage Management for Teachers	3
<b>Credit Hours</b>		<b>6</b>
Spring		
THTR 8106	World of the Play for Teachers	3
THTR 9382	Projects in Directing I	3
<b>Credit Hours</b>		<b>6</b>
Year 2		
Summer II		Credit Hours
THTR 8107	Acting II for Teachers	3
THTR 8108	Directing for the Musical Stage for Teachers	3
THTR 8109	Introduction to Design for Teachers	3
<b>Credit Hours</b>		<b>9</b>
<b>Total Credit Hours</b>		<b>30</b>

**Culminating Event:** Successful completion of coursework is required to earn the MA in Theater Instruction.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/theater-instruction-ma-ca-thin-ma>

## Department Information:

Theater Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
2001 N. 13th Street, 127 Presser Hall  
Philadelphia, PA 19122-6016  
tfma@temple.edu  
215-204-8598  
Fax: 215-204-4957

## Submission Address for Application Materials:

<https://apply.temple.edu/TFMA/>

## Department Contacts:

### Admissions:

James Short  
Recruitment Coordinator  
jshort@temple.edu

### Head of Theater Education:

Matthew Miller  
mbmiller@temple.edu  
215-204-4263

### Chair:

Fred Duer  
fmduer@temple.edu

## Graduate Certificate: Documentary Arts and Ethnographic Research

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER,  
FILM AND MEDIA ARTS

Learn more about the graduate certificate in Documentary Arts and Ethnographic Research.

## About the Certificate

The graduate certificate in Documentary Arts and Ethnographic Research is a 12-credit interdisciplinary program that involves faculty and courses in the Center for the Performing and Cinematic Arts, the College of Liberal Arts, and the Lew Klein College of Media and Communication. The certificate builds on Temple's strong international reputation in documentary film and visual anthropology. It is ideally suited for students who plan to incorporate visual studies, ethnographic methods and documentary practices into their artistic and scholarly projects. The certificate program offers students the opportunity to develop marketable applied expertise in practices that bridge the arts, humanities and social sciences.

The philosophy behind the certificate program is to promote a broad and critical use of diverse media tools in the study and representation of culture(s). Program topics include the theories, methods, aesthetics and ethics of documentary research and visual representation; the relationships between artistic, humanistic and scientific visual research methods; the collaborative use of visual media in indigenous, diaspora and non-Western communities; the critical understanding of the use of

new media in documentary contexts, such as mobile media; and the political economy that shapes how images are made, distributed and used worldwide. Students in the program develop skills to:

- create cultural, cross-cultural and interdisciplinary documentary projects through film, digital technologies and representational media;
- integrate visual and cross-cultural materials through innovative uses of technologies;
- incorporate cultural aesthetics, research ethics, cross-cultural research and the use of documentary arts and media tools in their teaching careers; and
- work on collaborative projects involving multiple countries and contexts that can include scholarly research, international government and nongovernmental research, participation in cross-disciplinary projects on contemporary issues, and media activism.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the certificate program director for more information.

**Non-Matriculated Student Policy:** The certificate program is open only to students enrolled in MFA and PhD programs at Temple University.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 21  
*Spring:* October 21

Access the certificate application here.

### Letters of Reference:

*Number Required:* 1

*From Whom:* A letter of support must be written by the applicant student's advisor.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree — and must be currently enrolled in an MFA or PhD program at Temple University.

**Statement of Goals:** Describe your reasons for pursuing the certificate in Documentary Arts and Ethnographic Research in 250 words.

**Interview:** Qualifying applicant students are invited for an interview with a member of the Certificate Steering Committee.

**Other Requirement:** Applicant students must provide certification that they are currently enrolled in good standing, maintaining a minimum GPA of 3.5 in their MFA or PhD program at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
Select at least one ANTH course and one FMA course to complete a minimum of two of the following:		6
ANTH 5389	Fieldwork in Ethnography	
ANTH 5438	Anthropology of Mass Media	
ANTH 5444	Anthropological Problems in Visual Production	
ANTH 8408	Approaches in the Anthropology of Visual Communication I	
FMA 5676	Anthropological Film/Media	
FMA 8462	Documentary Arts and Visual Research	
<b>Electives</b>		
Select at least two from the following: <sup>1</sup>		6
ANTH 5428	Theory and Methods in Culture and Communication	
ANTH 5439	Anthropology and Photography	
ANTH 5458	Anthropology of Public Culture	
ANTH 8012	Ethical Considerations in Anthropology Research	
ANTH 8344	Seminar in Expressive Culture	
ANTH 8409	Approaches in the Anthropology of Visual Communication II	
ANTH 8429	Problems in the Anthropology of Visual Communication	
ANTH 8435	Seminar in Visual Anthropology and the Arts	
ARTH 5405	History of Photography	
FMA 5241	Cinematography Workshop <sup>2</sup>	
FMA 5242	Videography <sup>2</sup>	
FMA 5672	History of Documentary Film	
FMA 5673	Time-Image Arts/Cinema Praxis	
FMA 5674	Media Arts Thry-Practice	
FMA 8244	Experimental Methods	
FMA 8245	Documentary Workshop	
FMA 8246	Advanced Documentary/Fiction Workshop	
FMA 8340	Topics in Production	
FMA 8450	Topics in Media	
FMA 8551	Digital Post-Production	
FMA 8670	Topics in Media Studies	
FMA 8680	Advanced Topics in Media Arts Studies	
MMC 9209	Media Ethnography	
PHOT 8283	Graduate Projects in Photography I	
PHOT 8284	Graduate Projects in Photography II	
SOC 8371	Sociology of Culture	
<b>Total Credit Hours</b>		<b>12</b>

1

Alternately, students may choose to take one or two additional courses from the list of core courses above to fulfill the electives requirement.

2

Only non-FMA students make apply this course toward the certificate.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/documentary-arts-and-ethnographic-research-certificate-graduate-ca-daer-grad>

### Department Information:

Film and Media Arts Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
2001 N. 13th Street, 127 Presser Hall  
Philadelphia, PA 19122-6016  
FilmMFA@temple.edu  
215-204-8598  
Fax: 215-204-4957

### Submission Address for Application Materials:

daep@temple.edu

### Department Contacts:

*Program Director:*  
Roderick Coover  
Associate Professor  
rcoover@temple.edu  
215-204-3859

*Chair:*  
Chet Pancake  
chet.pancake@temple.edu

## Graduate Certificate: Theater Instruction

Center for the Performing and Cinematic Arts / SCHOOL OF THEATER, FILM AND MEDIA ARTS

Learn more about the graduate certificate in Theater Instruction.

### About the Certificate

The graduate certificate in Theater Instruction is designed for teachers who have a desire to teach drama or lead after-school drama programs in a K-12 setting or who currently teach drama and want to refine their skills. The certificate program also allows teachers of other disciplines to pursue their interest in Theater Instruction. In either case, teachers take a sequence of courses that enhances their marketability. In accordance with the guidelines of the Pennsylvania Department of Education, the coursework may be taken for Act 48 Continuing Education credit and re-certification and gains the teacher an extra skill set that can be utilized in the classroom, during after-school activities, and to enhance the teacher's classroom presence. Skills acquired through the certificate program in Theater Instruction include confidence in public speaking and presentation, creativity, collaboration, technical theater and management, professionalism and empathy.

The certificate consists of a five-course, 15-credit sequence that satisfies the PA Department of Education's Theatre Endorsement. Further, since the five required courses constitute one-half of the courses needed to



complete the MA in Theater Instruction, students may choose to continue their studies beyond the certificate.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main, with a combination of hybrid, online and intensive course formats accommodating students' teaching schedules

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the recruitment coordinator for the School of Theater, Film and Media Arts for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits within the department at the discretion of individual instructors.

## Admission Requirements and Deadlines

*Fall, Spring and Summer II* admissions are on a rolling basis.

For information on how to apply, contact Matthew Miller, the Head of Theater Education, at [mbmiller@temple.edu](mailto:mbmiller@temple.edu).

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree, but it need not be in a theater-related field.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
THTR 8102	Acting 1 for Teachers	3
THTR 8104	Methods of Teaching Theater for Teachers	3
THTR 8105	Stage Management for Teachers	3
THTR 8106	World of the Play for Teachers	3
THTR 8111	Welcome Backstage for Teachers	3
<b>Total Credit Hours</b>		<b>15</b>

1

Completion of the 15 credits of coursework satisfies the Theatre Endorsement from the Pennsylvania Department of Education.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/theater-instruction-certificate-graduate-ca-thin-grad>

### Department Information:

Theater Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
2001 N. 13th Street, 127 Presser Hall  
Philadelphia, PA 19122-6016  
[tfma@temple.edu](mailto:tfma@temple.edu)  
215-204-8598

Fax: 215-204-4957

## Submission Address for Application Materials:

Graduate Admissions  
Center for the Performing and Cinematic Arts/School of Theater, Film and Media Arts  
2001 N. 13th Street, 127 Presser Hall (012-00)  
Philadelphia, PA 19122-6016  
[tfma@temple.edu](mailto:tfma@temple.edu)

## Department Contacts:

*Admissions:*  
James Short  
Recruitment Coordinator  
[jshort@temple.edu](mailto:jshort@temple.edu)

*Head of Theater Education:*  
Matthew Miller  
[mbmiller@temple.edu](mailto:mbmiller@temple.edu)  
215-204-4263

*Chair:*  
Fred Duer  
[fmduer@temple.edu](mailto:fmduer@temple.edu)

## School of Pharmacy

Located on Temple University's bustling Health Sciences Center campus, the School of Pharmacy strives to bridge the gaps between drug discovery, preclinical basic research and translation medicine.

We are positioned to continue to provide leadership in our educational mission, while also pursuing innovative research. In conjunction with both of these efforts, we train future researchers in pharmaceutical sciences, drug discovery and development, and basic preclinical and translational research.

In recent years, the School of Pharmacy has enjoyed tremendous growth in our research enterprise. We have established several centers of excellence for scientific study across a wide range of disciplines. The Temple University Drug Discovery Initiative, launched in 2010, has resulted in a substantial expansion of our research facilities and an increase in the number of talented and accomplished researchers joining our faculty and staff.

Efforts by the faculty and research staff of the School of Pharmacy are focused on multidisciplinary approaches to complex scientific problems associated with a number of important disease states. Funding for our research has been generously provided by several foundations, federal and state-funded grants, contract research programs and Temple University research awards. Members of our faculty have been recognized by outside scientific organizations with numerous honors, awards and invited lectureships.

The School of Pharmacy offers students the ideal combination of a high-quality education, dedicated faculty, active research programs, and a supportive atmosphere enlivened by diversity and community service.

### Graduate and Professional Programs and Certificates

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- Global Clinical and Pharmacovigilance Regulations MS (p. 732)
- Pharmaceutical Regulatory Sciences MS (p. 734)
- Pharmaceutical Sciences/Medicinal Chemistry MS (p. 735)
- Pharmaceutical Sciences/Pharmaceutics MS (p. 737)
- Pharmaceutical Sciences/Pharmacodynamics MS (p. 739)
- Pharmaceutical Sciences/Medicinal Chemistry PhD (p. 741)
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- Pharmacy PharmD (p. 751)
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- Graduate Certificate: Basic Pharmaceutical Development (p. 756)
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- Graduate Certificate: Biologics and Biosimilars: Regulatory Aspects (p. 758)
- Graduate Certificate: Biopharmaceutical Manufacturing and Regulatory Affairs (p. 759)
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- Graduate Certificate: Generic Drugs (p. 762)
- Graduate Certificate: Global Pharmacovigilance/Benefit-Risk Management (p. 763)
- Graduate Certificate: Medical Device (p. 764)
- Graduate Certificate: Pharmaceutical Labeling, Advertising and Promotions (p. 765)
- Graduate Certificate: Pharmaceutical Manufacturing: Process Development and Analysis (p. 766)
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- Post-Master's Certificate: Advanced Regulatory Affairs and Quality Assurance (p. 769)
- Post-Master's Certificate: Biologics and Biosimilars Manufacturing (p. 771)
- Post-Master's Certificate: Biologics and Biosimilars: Regulatory Aspects (p. 772)
- Post-Master's Certificate: Biopharmaceutical Manufacturing and Regulatory Affairs (p. 773)
- Post-Master's Certificate: Clinical Trial Management (p. 774)
- Post-Master's Certificate: Food Regulatory Affairs and Quality Assurance (p. 775)
- Post-Master's Certificate: Generic Drugs (p. 776)
- Post-Master's Certificate: Global Pharmacovigilance/Benefit-Risk Management (p. 777)
- Post-Master's Certificate: Medical Device (p. 778)
- Post-Master's Certificate: Pharmaceutical Labeling, Advertising and Promotions (p. 779)
- Post-Master's Certificate: Pharmaceutical Manufacturing: Process Development and Analysis (p. 780)
- Post-Master's Certificate: Sterile Process Manufacturing (p. 781)
- Post-Master's Certificate: Validation Sciences (p. 782)

### Graduate Faculty

*Magid Abou-Gharbia*, Laura H. Carnell Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Pennsylvania.

*Carlos Barrero*, Assistant Professor, Department of Pharmaceutical Sciences, School of Pharmacy; MD, Universidad de Caldas.

*Benjamin E. Blass*, Assistant Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Rochester.

*Michael R. Borenstein*, Associate Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, Temple University.

*Daniel J. Canney*, Associate Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, Temple University.

*Wayne E. Childers*, Associate Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Georgia.

*A. Reza Fassihi*, Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, Brighton University.

*Patrick M. Glassman*, Assistant Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University at Buffalo.

*Marc A. Ilies*, Professor of Instruction, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Bucharest.

*Kenneth R. Korzekwa*, Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Washington.

*David B. Lebo*, Professor of Instruction, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, Philadelphia College of Pharmacy.

*Salim Merali*, Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, City University of New York.

*Swati V. Nagar*, Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Minnesota.

*Jayanth Panyam*, Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Nebraska Medical Center.

*Oscar Perez-Leal*, Assistant Professor, Department of Pharmaceutical Sciences, School of Pharmacy; MD, Universidad del Norte.

*Tina Tran*, Assistant Professor, Department of Pharmacy Practice, School of Pharmacy; PharmD, University of California San Francisco.

*Ellen A. Walker*, Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Michigan.

*Ho-Lun Wong*, Professor, Department of Pharmaceutical Sciences, School of Pharmacy; PhD, University of Toronto.

## Advanced Biotherapeutics: Manufacturing and Regulatory Affairs MS

### SCHOOL OF PHARMACY

Learn more about the Master of Science in Advanced Biotherapeutics: Manufacturing and Regulatory Affairs.

### About the Program

The MS in Advanced Biotherapeutics: Manufacturing and Regulatory Affairs (ABMRA) is a program arising from a partnership between Temple University's School of Pharmacy and the Kanbar College of Design, Engineering & Commerce at Thomas Jefferson University. The program combines courses from Temple's Regulatory Affairs and Quality Assurance (RAQA) graduate program with courses from the Jefferson Institute for Bioprocessing (JIB). Students may earn the ABMRA degree from either Temple University or Thomas Jefferson University, depending on their area of interest: biopharmaceutical manufacturing (JIB) or regulatory affairs and quality assurance (Temple).

The ABMRA degree addresses the career needs of individuals involved in the discovery and manufacture of large-molecule therapeutic agents, including cell and gene therapies (GCT), vaccines and personalized medicines. The demand and discovery of these therapeutic agents rooted in monoclonal antibody-based therapies and messenger-RA technology continue to burgeon, creating a national shortage of skilled and knowledgeable professionals familiar with the manufacturing processes and regulatory/quality requirements of these agents.

Temple's ABMRA degree highlights the regulatory science practices and strategies as well as quality expectations involved in the development and manufacture of biopharmaceutical products. Jefferson's ABMRA degree focuses more on the development, manufacturing and analytical processes associated with the production of biopharmaceutical therapeutic agents on state-of-the-art equipment located at the JIB facility in Spring House, PA. Students have the ability to earn certificates from either school while also earning a degree from either Temple or Jefferson, depending on their preferred area of focus.

Graduates of the ABMRA degree from either university have a broad foundation in:

- U.S. and global regulatory landscapes for biologics and biosimilars;
- regulatory strategies for non-clinical and clinical studies for biologics and biosimilar products;
- Chemistry, Manufacturing and Control (CMC) strategies for biologics and biosimilars;
- phase-appropriate regulatory compliance elements applicable to biologics and biosimilars;
- fundamentals of Quality by Design (QbD) and Statistical Process Control (SPC) principles as relevant to biologics and biosimilars manufacturing;
- mastery of core engineering, scientific, regulatory and quality principles utilized in the development and manufacturing of biopharmaceuticals, biologics and advanced therapies;
- biopharmaceutical manufacturing operations, including bioreactor, chromatography, formulation and product concentration operations; and
- process development concepts, from early to late phase development and launch.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online, in a hybrid format with some in-person instruction but largely learning online, or:

- at Fort Washington evenings and weekends for Temple courses
- at Spring House, PA for JIB courses

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program fosters interdisciplinary study between biopharmaceutical sciences and technology as well as mandated regulatory and quality requirements.

**Job Prospects:** The program prepares graduates for positions in the global marketplace related to biosimilars and biologics.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Master's students are generally not considered for financial support.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1; December 15 international

*Spring:* November 1; September 1 international

Summer I: March 1; January 15 international

Applications are processed throughout the year. Late applications may be considered for admission. However, the entire application packet must be received by the Regulatory Affairs and Quality Assurance Office before it is reviewed by the Admissions Committee. Applicants are responsible for making sure that all materials have been received.

APPLY to this graduate program, submitting the application to QARA2@temple.edu.

Students who wish to apply to Jefferson's ABMRA MS should visit <https://www.jefferson.edu/admissions/graduate/apply.html>.

#### Letters of Reference:

Number Required: 2

*From Whom:* One letter of recommendation should be obtained from a college/university faculty member familiar with academic competence and one from a work supervisor.

**Coursework Required for Admission Consideration:** It is expected that applicants have a strong science or engineering background.

**Bachelor's Degree in Discipline/Related Discipline:** A BS in Bioengineering or Chemical Engineering, Biochemistry, Biology, Chemistry, Physics or a related discipline is required.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** Describe your experience in the pharmaceutical, biopharmaceutical or related industries, indicating how the ABMRA MS program will help you achieve your career objectives.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV, signed by the applicant, required.

**Transfer Credit:** Transfer credits are not accepted. Any student who has completed a similar RAQA course through an accredited graduate program may request to replace a required course with a listed elective course. Such requests are considered on a case-by-case basis.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36, of which 21 are completed at Temple University's School of Pharmacy and 15 at Thomas Jefferson University's Jefferson Institute for Bioprocessing (JIB)

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	3
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	3
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	3
<b>Electives</b>		
Select three from the following:		9
PS 5501	Development of Sterile Products	
PS 8005	Pharmaceutical Biotechnology	
QARA 5451	Statistical Quality Control	
QARA 5468	Validation of Facilities, Utilities and Equipment (FUE)	
QARA 5471	Biotechnology: Bioprocess Basics	
QARA 5474	Process Validation	
QARA 5479	Advanced Good Manufacturing Practices - Defining "c"	
QARA 5492	Production of Sterile Parenterals	
QARA 5493	Sterilization Processes	
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	
QARA 5514	Regulatory eSubmissions	
QARA 5516	Cleaning Validation	
QARA 5538	Clinical Drug Safety and Pharmacovigilance <sup>1</sup>	
QARA 5544	Regulatory Intelligence	
QARA 5571	Post-Marketing Safety Surveillance <sup>1</sup>	
QARA 5574	Pharmaceutical Quality Management Systems	
QARA 5575	Regulatory Sciences: Managing the Guidelines to Quality	
QARA 5625	Process Analytical Technology (PAT)	
QARA 5627	Statistical Design of Experiments (DOE)	
QARA 5629	Process Monitoring	
<b>JIB Required Courses</b> <sup>2</sup>		<b>12</b>
<b>JIB Elective(s)</b> <sup>3</sup>		<b>3</b>
<b>Total Credit Hours</b>		<b>36</b>

1

Students may take QARA 5538 or QARA 5571, but not both.

2

Four 3-credit courses required by JIB include ENGR 604 Biopharm Process Operations, ENGR 609 Bioprocess Engineering for Scientists, ENGR 611 Principles of Biopharmaceutical Process Engineering, and ENGR 621 Introduction to Biopharmaceutical and Biologics Production. Coursework is subject to change to reflect the most current trends and techniques in the production of biopharmaceutical therapeutic agents.

3

Electives approved by JIB include four 3-credit courses: ENGR 601 Intro Upstream Unit Operations, ENGR 602 Intro Downstream Unit Operations, ENGR 613 Vector and Cell Line Design, and ENGR 622 Biotherapeutic Formulation. Three 1.5-credit courses are also approved: ENGR 612 Emerging Therapeutics; ENGR 614 Vaccine Formulation; and ENGR 618 Technical and Regulatory Aspects of Analytical Method Validation. Coursework is subject to change to reflect the most current trends and techniques in the production of biopharmaceutical therapeutic agents.

**Culminating Event:** Successful completion of coursework is required to earn Temple's ABMRA MS.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/raqa/programs-degrees-certificates/advanced-biotherapeutics-manufacturing-and-ra-abmra-ms-degree>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Submission Address for Application Materials:

QARA2@temple.edu

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

#### Admissions:

Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

#### Graduate Chairperson:

Swati Nagar, PhD  
phscgrad@temple.edu

#### Assistant Dean:

Wendy Lebing, MALD, MS  
wlebing@temple.edu  
267-468-8560

# Global Clinical and Pharmacovigilance Regulations MS

SCHOOL OF PHARMACY

Learn more about the Master of Science in Global Clinical and Pharmacovigilance Regulations.

## About the Program

The MS in Global Clinical and Pharmacovigilance Regulations addresses the career needs of individuals involved in domestic and global clinical trials and pharmacovigilance activities within the pharmaceutical industry, including managing and assisting in clinical trials, supervising record keeping of clinical trials, reviewing safety data of clinical trials or post-marketing reports of healthcare products, and other related activities. In recent years, pharmacovigilance activities have been conducted alongside clinical trials to determine the benefits and risk factors of products both under development and on the market.

Pharmacovigilance, or drug safety, relates to the myriad of activities the pharmaceutical and related industries use in monitoring, assessing and compiling the benefits and risks involved with their products. Whereas pharmacovigilance studies used to be undertaken once products were already on the market, the latest trend is to conduct these studies with "first in human" studies, which are generally done on healthy volunteer subjects to ascertain how a new product affects an individual without the known disease state. Clinical trials are highly regulated research studies of pharmaceutical and related products, treatment options, or medical devices in human beings. Their goal is to find new or better ways to prevent, detect, diagnose, or treat disease or disease states. In order to accomplish this, clinical trials must rigorously follow certain protocols, study designs, and data collection and monitoring methods defined by regulatory authorities.

The MS in Global Clinical and Pharmacovigilance Regulations degree program is primarily designed for PharmD students who already possess extensive experience in clinical settings, but would benefit from specific knowledge of domestic and global regulations to be more marketable for careers in the pharmaceutical industry. This MS degree combining clinical practices with global pharmacovigilance empowers PharmD graduates with knowledge of:

- the need for pharmacovigilance and clinical regulations;
- the evolution of global pharmacovigilance and clinical regulations;
- domestic and international pharmacovigilance and clinical requirements and regulations for healthcare products;
- differences in regulations between product types and regions;
- current utilization of pharmacovigilance data throughout the lifespan of all products;
- the ability to contextualize and interpret safety data; and
- the paramount importance of data collection, statistics and data mining in the industry.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online or at Fort Washington on evenings and weekends

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program fosters interdisciplinary study between the pharmaceutical sciences and technology.

**Job Prospects:** The program prepares graduates for positions in the global marketplace related to drug safety and human clinical trials.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Master's students are generally not considered for financial support.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1; December 15 international

*Spring:* November 1; September 1 international

*Summer I:* March 1; January 15 international

Applications are processed throughout the year. Late applications may be considered for admission. However, the entire application packet must be received by the Regulatory Affairs and Quality Assurance Office before it is reviewed by the Admissions Committee. Applicants are responsible for making sure that all materials have been received.

APPLY to this graduate program, submitting the application to QARA2@temple.edu.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence.

**Coursework Required for Admission Consideration:** It is expected that applicants are PharmD students or graduates.

**Bachelor's Degree in Discipline/Related Discipline:** A BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline is required.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** Describe your experience in the pharmaceutical or related industries, indicating how the Global Clinical and Pharmacovigilance Regulations MS program will help you achieve your career objectives.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

**Transfer Credit:** Temple University PharmD students may apply a maximum of 15 credits toward this MS degree. The following courses are applicable:

Code	Title	Credit Hours
	Ethics course	2
PP P254	Bio Stat/Med Lit Eval	2
PP P312	ADRS Organ Systems Appr	2
PP P313	Clin Pharmacokinetics	3
QARA 5459	Drug Development	3
QARA 5536	Good Clinical Practices	3
QARA 5537	Clinical Trial Management	3

Students in and graduates of PharmD programs at other accredited schools of pharmacy may apply for transfer credits. Such requests are decided on a case-by-case basis. A maximum of 6 transfer credits are permitted for this group of prospective students.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5508	Good Pharmacovigilance Operations	3
QARA 5536	Good Clinical Practices	3
QARA 5537	Clinical Trial Management	3
QARA 5538	Clinical Drug Safety and Pharmacovigilance	3
	or QARA 5571 Post-Marketing Safety Surveillance	
QARA 5573	Pharmacoepidemiology	3
QARA 5578	Benefit Risk Management and Safety Signaling of Healthcare Products	3
QARA 5579	Regulatory and Legal Basis of Pharmacovigilance	3
<b>Electives</b>		
Select from the following approved courses:		6
PP P312	ADRS Organ Systems Appr	
PP P313	Clin Pharmacokinetics	
QARA 5497	Statistics for Clinical Trials <sup>1</sup>	
QARA 5539	Global Clinical Drug Development	
QARA 5547	Project Management for Clinical Trials	
QARA 5612	Bioethics for Pharmaceutical Professionals	
QARA 5618	Clinical Data Management (CDM)	
<b>Total Credit Hours</b>		<b>30</b>

1

Alternately, students may take PP P254 Bio Stat/Med Lit Eval.

**Culminating Event:** Successful completion of coursework is required to earn the MS in Global Clinical and Pharmacovigilance Regulations.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/academics/master-science-global-clinical-and-pharmacovigilance-regulations-gcpr>

## Department Information:

Global Clinical and Pharmacovigilance Regulations Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

## Submission Address for Application:

QARA2@temple.edu

## Mailing Address for Application Materials:

Temple University  
Global Clinical and Pharmacovigilance Regulations Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

## Department Contacts:

### Admissions:

Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

### Graduate Chairperson:

Swati Nagar, PhD  
phscgrad@temple.edu

### Assistant Dean:

Wendy Lebing, MALD, MS  
wlebing@temple.edu  
267-468-8560

# Pharmaceutical Regulatory Sciences MS

SCHOOL OF PHARMACY

Learn more about the Master of Science in Pharmaceutical Regulatory Sciences.

## About the Program

The MS in Pharmaceutical Regulatory Sciences (MSPRS) blends two disciplines, pharmaceutical and regulatory sciences, providing a unique and critical academic path for professionals in the pharmaceutical, medical device and biologics industries:

- Pharmaceutical science courses focus on the core science principles involved in the development and manufacturing of therapeutic products.
- RAQA courses provide a strong framework of regulations and quality practices, addressing scientific methods needed to ensure safety, efficacy, quality and consistent performance.

The MSPRS program is designed to prepare a cadre within the pharmaceutical industry of senior regulatory professionals who are familiar with both the pharmaceutical sciences and worldwide regulatory practices as they interact with the U.S. Food and Drug Administration (FDA) and other global regulators in bringing new chemical entities and biologics to market.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online, in a hybrid format with some in-person instruction but the majority of learning online

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program fosters interdisciplinary study with the pharmaceutical sciences and technology.

**Job Prospects:** The program prepares graduates for positions in the global marketplace related to the pharmaceutical and regulatory sciences.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Master's students are generally not considered for financial support.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1; December 15 international  
*Spring:* November 1; September 1 international  
*Summer I:* March 1; January 15 international

Applications are processed throughout the year. Late applications may be considered for admission. However, the entire application packet must be received by the Graduate Studies Office before it is reviewed by the Admissions Committee. Applicants are responsible for making sure that all materials have been received.

*APPLY to this graduate program, submitting the application to QARA2@temple.edu.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from supervisors or college/university instructors familiar with the student's academic competence.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Pharmacy, Biochemistry, Biology, Chemistry, Chemical Engineering or Mechanical Engineering is required.

Applicants who did not achieve a 3.0 undergraduate GPA in a science discipline may be admitted after taking three of the four courses listed below and earning an overall 3.33 (B+) GPA in the coursework:

Code	Title	Credit Hours
PS 8002	Pharmaceutical Analysis	3
PS 8005	Pharmaceutical Biotechnology	3
PS 8006	Physical Pharmacy I	3
QARA 5575	Regulatory Sciences: Managing the Guidelines to Quality	3

**Statement of Goals:** Describe your career goals and objectives in 500 to 1,500 words.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 7.0
- PTE Academic: 58

**Resume:** Current resume or CV required.

**Transfer Credit:** Students may transfer a maximum of 6 credits into the MS program. These credits must be similar or identical to courses offered by the Temple University School of Pharmacy and applicable to the MS in Pharmaceutical Regulatory Sciences. In addition, the student must request the transfer credits at the time of application to the MS program, providing copies of course syllabi. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8003	Pharmaceutical Manufacturing I: Preformulation/ Formulation	3
PS 8004	Solid Dosage Forms - Small Molecules	3
PS 8005	Pharmaceutical Biotechnology	3
QARA 5468	Validation of Facilities, Utilities and Equipment (FUE)	3
QARA 5495	Investigational New Drug/New Drug Application Submissions	3
QARA 5575	Regulatory Sciences: Managing the Guidelines to Quality	3
QARA 5576	Global CMC Issues and Regulatory Dossier (Or QARA 5577 )	3
QARA 8006	Physical Pharmacy I	3
<b>Pharmaceutical Sciences Elective</b>		
Select one from the following:		3
PS 8002	Pharmaceutical Analysis	
PS 8007	Applied Biopharmaceutics	
<b>Regulatory Affairs and Quality Assurance Elective</b>		
Select one from the following:		3
QARA 5474	Process Validation	
QARA 5478	High Purity Water Systems	
QARA 5498	Computerized System Validation	
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	

QARA 5606 Regulatory Strategy: Discovery to Approval

**Total Credit Hours** 30

**Culminating Event:** Successful completion of coursework is required to earn the MS in Pharmaceutical Regulatory Sciences.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/raqa/programs-degrees-certificates/pharmaceutical-regulatory-sciences-ms-degree>

### Department Information:

Pharmaceutical Regulatory Sciences Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Submission Address for Application:

QARA2@temple.edu

### Mailing Address for Application Materials:

Temple University  
Pharmaceutical Regulatory Sciences Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

#### Admissions:

Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

#### Graduate Chairperson:

Swati Nagar, PhD  
phscgrad@temple.edu

#### Assistant Dean:

Wendy Lebing, MALD, MS  
wlebing@temple.edu  
267-468-8560

## Pharmaceutical Sciences/ Medicinal Chemistry MS

SCHOOL OF PHARMACY

Learn more about the Master of Science in Pharmaceutical Sciences.

### About the Program

The School of Pharmacy offers a graduate program leading to the MS, with a choice of Thesis or Non-Thesis Option, and the PhD in Pharmaceutical Sciences with a concentration in Medicinal Chemistry. The program is designed to prepare students for positions in the pharmaceutical industry, government agencies, and as faculty in schools of pharmacy.



**Time Limit for Degree Completion:** 5 years

**Campus Location:** Health Sciences Center, Main

Some courses may be offered at the Fort Washington campus. Research must be carried out at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

**Full-Time/Part-Time Status:** Full-time status is recommended due to the nature of ongoing research.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and collaborations among faculty and students with interests in biochemistry, molecular modeling, organic chemistry and pharmacology.

**Areas of Specialization:** The focus is Medicinal and Pharmaceutical Chemistry, including design and synthesis of ligands for nicotinic receptors and ligands for retinoic acid receptors, novel anticonvulsants, and the development of analytical methodologies.

**Job Prospects:** The program primarily concentrates on providing research scientists for the pharmaceutical industry and government agencies, as well as faculty for schools of pharmacy.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Master's students are generally not considered for financial support. Financial support in the form of University fellowships, teaching assistantships and research assistantships is generally available to PhD candidates only. Only under rare circumstances are MS students considered for support.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* December 15

All applications are evaluated together after the deadline.

APPLY ONLINE to this graduate program.

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and professionals in a supervisory position.

**Coursework Required for Admission Consideration:** It is recommended that applicants complete the courses (or their equivalent, as determined by the School of Pharmacy) to obtain a BS in Chemistry, preferably Organic Chemistry, before entering the program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Biochemistry, Chemistry (preferably Organic Chemistry), or Pharmacy is required.

Transcripts from all post-secondary institutions attended may be sent electronically to [tusgrad@temple.edu](mailto:tusgrad@temple.edu). Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the School of Pharmacy's Office of Graduate Studies.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** In approximately 500 to 1,000 words, state your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

**Transfer Credit:** With approval, courses specific to Medicinal Chemistry or Organic Chemistry may be transferred into the program. Applicants must present supporting documentation (syllabus, course description, and/or transcript) for transfer consideration at the time of application. The maximum number of credits a student may transfer into the MS program is 6.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 36

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8002	Pharmaceutical Analysis	3
PS 8051	Seminar in Pharm Science	1
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
PS 8129	Bioethics in Research	2
PS 8131	Principles of Biochemistry	4
PS 8403	Advanced Pharmacogenomics	2
STAT 5002	Introduction to Biostatistics	3
<b>Concentration-Specific Electives</b> <sup>1,2</sup>		<b>14-8</b>
<b>Research Course</b> <sup>3</sup>		
PS 9996	Master's Research	0-6
<b>Total Credit Hours</b>		<b>36</b>

<sup>1</sup>

Suggested electives include CHEM 4201 Organic Structure and Mechanisms, CHEM 5202 Organic Reaction Mechanisms, PS 8009 Advanced Medicinal Chemistry I, and PS 8011 Advanced Medicinal Chemistry II. Electives should be taken primarily in Chemistry. Coursework in Biomedical Sciences, Computer and Information Science, and other disciplines is also permissible with guidance from the advisor.

2

Students in the Thesis Option take 8 credits of electives, while students in the Non-Thesis Option complete 14 elective credits.

3

Students in the Thesis Option take 6 credits of PS 9996. In lieu of this research course, students in the Non-Thesis Option complete their electives.

### Culminating Events:

#### *Thesis Option:*

A thesis is required when choosing the Thesis Option. The MS thesis is an original, theoretical and/or empirical study that contributes to the field of Medicinal/Pharmaceutical Chemistry. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The thesis should be rigorously investigated; uphold the ethics and standards of the pharmaceutical sciences; demonstrate an understanding of the relationship between the primary area of interest and the broader field of medicinal chemistry; and be prepared for publication in a professional journal.

Students who are preparing to defend their thesis should confirm a time and date with their advisor and register with the Administrative Assistant at least 15 days before the defense is to be scheduled. The Administrative Assistant arranges the time, date and room within two working days and forwards to the student the appropriate forms. Once approved, the public announcement of the defense is posted.

The Thesis Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. This committee is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be members of the Graduate Faculty of the School of Pharmacy. The Thesis Examining Committee votes to pass or fail the thesis and the defense at the conclusion of the public presentation.

#### *Non-Thesis Option:*

Successful completion of coursework constitutes the culminating event for this option.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/academics/phdms-pharmaceutical-sciences>

### Department Information:

Dept. of Pharmaceutical Sciences Office of Graduate Studies  
School of Pharmacy  
3307 N. Broad Street, Suite 528  
Philadelphia, PA 19140  
tuspgrad@temple.edu  
215-707-4972

### Submission Address for Application Materials:

[https://apply.temple.edu/PHARM\\_GRAD/](https://apply.temple.edu/PHARM_GRAD/)

### Department Contacts:

*Admissions:*  
Sophon Din

tuspgrad@temple.edu

*Program Coordinator:*  
Daniel J. Canney, PhD  
tuspgrad@temple.edu

*Graduate Chairperson:*  
Swati Nagar, PhD  
phscgrad@temple.edu

*Department Chairperson:*  
Ellen Walker, PhD  
ellen.walker@temple.edu

## Pharmaceutical Sciences/ Pharmaceutics MS

SCHOOL OF PHARMACY

Learn more about the Master of Science in Pharmaceutical Sciences.

### About the Program

The School of Pharmacy offers a graduate program leading to the MS, with a choice of Thesis or Non-Thesis Option, and the PhD in Pharmaceutical Sciences with a concentration in Pharmaceutics. The program is designed to prepare students for positions in the pharmaceutical industry, government agencies, and as faculty in schools of pharmacy.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Health Sciences Center, Fort Washington

Students in the [Thesis Option](#) take a majority of required and elective courses at the Health Sciences Center and Fort Washington campuses. Some courses may be offered at Main campus. Research must be carried out at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

Students in the [Non-Thesis Option](#) take a majority of required and elective courses at Fort Washington. Some courses may be offered at the Health Sciences Center campus.

**Full-Time/Part-Time Status:** The program is considered full-time for those in the [Thesis Option](#) and part-time for those in the [Non-Thesis Option](#). Part-time students can complete the program through classes offered during evenings and weekends primarily at the Fort Washington campus.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and collaborations among faculty and students with interests in biochemistry, molecular modeling, organic chemistry and pharmacology.

**Areas of Specialization:** Faculty members specialize and offer graduate coursework in controlled release dosage forms, drug metabolism, encapsulation, mechanisms of drug action, pharmaceutical analysis, pharmacokinetics and solid dosage forms.

**Job Prospects:** Graduates generally find employment in the pharmaceutical industry, government agencies or academia.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Master's students are generally not considered for financial support. Financial support in the form of University fellowships, teaching assistantships and research assistantships is generally available to PhD candidates only. Only under rare circumstances are MS students in the [Thesis Option](#) considered for support. Students enrolled in the [Non-Thesis Option](#) are ineligible for financial support because their program is part-time.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

All applications are evaluated together after the deadline.

For the [Thesis Option](#), APPLY ONLINE.

For the [Non-Thesis Option](#), contact Sophon Din, Administrative Assistant, at [tuspgrad@temple.edu](mailto:tuspgrad@temple.edu) or 215-707-4972. Application materials are to be mailed to:

Temple University School of Pharmacy  
Dept. of Pharmaceutical Sciences  
Office of Graduate Studies  
3307 N. Broad Street, Suite 528  
Philadelphia, PA 19140

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and professionals in a supervisory position.

**Coursework Required for Admission Consideration:** It is recommended that applicants should have completed a minimum of two years of General Chemistry, including Organic Chemistry; one Analytical Chemistry course; and Mathematics, including at least Introductory Calculus. A course in Physical Chemistry is also advisable.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Pharmacy, Biology, Biochemistry, Chemistry, Engineering or a related discipline is required.

Transcripts from all post-secondary institutions attended may be sent electronically to [tuspgrad@temple.edu](mailto:tuspgrad@temple.edu). Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the School of Pharmacy's Office of Graduate Studies.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** In approximately 500 to 1,000 words, state your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV is required whether applying for the [Thesis Option](#) or the [Non-Thesis Option](#).

**Transfer Credit:** With approval, courses specific to the field of Pharmaceutics may be transferred into the program. Applicants must present supporting documentation (syllabus, course description and/or transcript) for transfer consideration at the time of application. The maximum number of credits a student may transfer into the MS program is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36

*Required Courses:*

### Thesis Option

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8000	Topics in Pharmaceutical Sciences	3
PS 8002	Pharmaceutical Analysis	3
PS 8051	Seminar in Pharm Science	1
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
PS 8129	Bioethics in Research	2
PS 8403	Advanced Pharmacogenomics	2
QARA 5451	Statistical Quality Control	3
<b>Concentration-Specific Courses</b>		
PS 8003	Pharmaceutical Manufacturing I: Preformulation/Formulation	3
PS 8004	Solid Dosage Forms - Small Molecules	3
<b>Elective</b> 3		
<b>Research Course</b>		
PS 9996	Master's Research	6
<b>Total Credit Hours</b>		<b>36</b>

### Non-Thesis Option

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8002	Pharmaceutical Analysis	3
PS 8003	Pharmaceutical Manufacturing I: Preformulation/Formulation	3
PS 8004	Solid Dosage Forms - Small Molecules	3

PS 8005	Pharmaceutical Biotechnology	3
PS 8006	Physical Pharmacy I	3
PS 8007	Applied Biopharmaceutics	3

**Electives**

Select six from the following approved courses: 18

PS 5451	Statistical Quality Control	
PS 5492	Production of Sterile Products	
PS 5493	Sterilization Processes	
PS 5499	Pharmaceutical Drug Dosage Forms	
PS 5501	Development of Sterile Products	
PS 8111	Introduction to Toxicology	
PS 8127	Pharmacokinetics	
PS 8478	Modified Release Dosage Forms	
PS 8582	Physical Pharmacy II	
QARA 5469	Pharmaceutical Laboratory Quality Systems and Operations	
QARA 5477	Good Manufacturing Practices	
QARA 5478	High Purity Water Systems	
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	
QARA 5575	Regulatory Sciences: Managing the Guidelines to Quality	
QARA 5655	Analytical Chemistry in Pharmaceutical Laboratories	

**Total Credit Hours** 36

**Culminating Event:***Thesis:*

For the [Thesis Option](#), the MS thesis is the culminating event. The thesis is an original, theoretical and/or empirical study that contributes to the field of Pharmaceutics. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The thesis should be rigorously investigated; uphold the ethics and standards of the Pharmaceutics field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of Pharmaceutics; and be prepared for publication in a professional journal.

Students who are preparing to defend their thesis should confirm a time and date with their advisor and register with the Administrative Assistant at least 15 days before the defense is to be scheduled. The Administrative Assistant arranges the time, date and room within two working days and forwards to the student the appropriate forms. Once approved, the public announcement of the defense is posted.

The Thesis Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. This committee is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be members of the Graduate Faculty of the School of Pharmacy. The Thesis Examining Committee votes to pass or fail the thesis and the defense at the conclusion of the public presentation.

The [Non-Thesis Option](#) has no culminating events except for successful completion of coursework.

**Contacts****Program Web Address:**

<https://pharmacy.temple.edu/academics/phdms-pharmaceutical-sciences>

**Department Information:**

Dept. of Pharmaceutical Sciences Office of Graduate Studies  
School of Pharmacy  
3307 N. Broad Street, Suite 528  
Philadelphia, PA 19140  
tuspgrad@temple.edu  
215-707-4972

**Submission Address for "Thesis Option" Application Materials:**

[https://apply.temple.edu/PHARM\\_GRAD/](https://apply.temple.edu/PHARM_GRAD/)

**Mailing Address for "Non-Thesis Option" Application Materials:**

Dept. of Pharmaceutical Sciences Office of Graduate Studies  
School of Pharmacy  
3307 N. Broad Street, Suite 528 (602-00)  
Philadelphia, PA 19140

**Department Contacts:***Admissions:*

Sophon Din  
tuspgrad@temple.edu

*Program Coordinator:*

Daniel J. Canney, PhD  
tuspgrad@temple.edu

*Graduate Chairperson:*

Swati Nagar, PhD  
phscgrad@temple.edu

*Department Chairperson:*

Ellen Walker, PhD  
ellen.walker@temple.edu

**Pharmaceutical Sciences/  
Pharmacodynamics MS**

SCHOOL OF PHARMACY

Learn more about the Master of Science in Pharmaceutical Sciences.

**About the Program**

The School of Pharmacy offers a graduate program leading to the MS, with a choice of Thesis or Non-Thesis Option, and the PhD in Pharmaceutical Sciences with a concentration in Pharmacodynamics. The program is designed to prepare students for positions in the pharmaceutical industry, government agencies, and as faculty in departments engaged in biomedical research.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Health Sciences Center, Main

Some courses may be offered at the Fort Washington campus. Research must be carried out at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

**Full-Time/Part-Time Status:** Full-time status is recommended due to the nature of ongoing research.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and collaborations among faculty and students with interests in biochemistry, molecular modeling, organic chemistry and pharmacology.

**Areas of Specialization:** The Pharmacodynamics concentration involves the study of integrated drug transport and mechanism of drug action research.

**Job Prospects:** Graduates generally accept employment offers shortly before or after defending their thesis. Job opportunities for graduates include positions as postdoctoral researchers, scientists in the pharmaceutical industry, and faculty members in a variety of departments involved in biomedical research.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Master's students are generally not considered for financial support. Financial support in the form of University fellowships, teaching assistantships and research assistantships is generally available to PhD candidates only. Only under rare circumstances are MS students considered for support.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

All applications are evaluated together after the deadline.

APPLY ONLINE to this graduate program.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and professionals in a supervisory position.

**Coursework Required for Admission Consideration:** It is recommended that applicants complete the courses (or their equivalent, as determined by the School of Pharmacy) to obtain a BS degree in Biochemistry, Biology, Pharmacology, Pharmacy or Psychology.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Biochemistry, Biology, Molecular Biology, Pharmacology, Pharmacy or Psychology is required.

Transcripts from all post-secondary institutions attended may be sent electronically to [tuspsgrad@temple.edu](mailto:tuspsgrad@temple.edu). Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the School of Pharmacy's Office of Graduate Studies.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider,

either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** In approximately 500 to 1,000 words, state your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

**Transfer Credit:** With approval, courses specific to the field of Pharmacodynamics may be transferred into the program. Applicants must present supporting documentation (syllabus, course description, and/or transcript) for transfer consideration at the time of application. The maximum number of credits a student may transfer into the MS program is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8002	Pharmaceutical Analysis	3
PS 8051	Seminar in Pharm Science	1
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
PS 8129	Bioethics in Research	2
PS 8131	Principles of Biochemistry	4
PS 8402	Pharmacodynamics	3
PS 8403	Advanced Pharmacogenomics	2
STAT 5002	Introduction to Biostatistics	3
<b>Concentration-Specific Electives</b> <sup>1,2</sup>		<b>11-5</b>
<b>Research Course</b> <sup>3</sup>		
PS 9996	Master's Research	0-6
<b>Total Credit Hours</b>		<b>36</b>

1

Electives can be taken in Pharmaceutical Sciences, Biomedical Sciences, Biology, and other disciplines with guidance from the advisor.

2

Students in the Thesis Option take 5 credits of electives, while students in the Non-Thesis Option complete 11 elective credits.

3

Students in the Thesis Option take 6 credits of PS 9996. In lieu of this research course, students in the Non-Thesis Option complete their electives.

**Culminating Events:***Thesis Option:*

A thesis is required when choosing the Thesis Option. The MS thesis is an original, theoretical and/or empirical study that contributes to the field of Pharmacodynamics. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The thesis should be rigorously investigated; uphold the ethics and standards of the pharmaceutical sciences; demonstrate an understanding of the relationship between the primary area of interest and the broader field of pharmacodynamics; and be prepared for publication in a professional journal.

Students who are preparing to defend their thesis should confirm a time and date with their advisor and register with the Administrative Assistant at least 15 days before the defense is to be scheduled. The Administrative Assistant arranges the time, date and room within two working days and forwards to the student the appropriate forms. Once approved, the public announcement of the defense is posted.

The Thesis Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. This committee is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be members of the Graduate Faculty of the School of Pharmacy. The Thesis Examining Committee votes to pass or fail the thesis and the defense at the conclusion of the public presentation.

*Non-Thesis Option:*

Successful completion of coursework constitutes the culminating event for this option.

**Contacts****Program Web Address:**

<https://pharmacy.temple.edu/academics/phdms-pharmaceutical-sciences>

**Department Information:**

Dept. of Pharmaceutical Sciences Office of Graduate Studies  
School of Pharmacy  
3307 N. Broad Street, Suite 528  
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tuspgrad@temple.edu  
215-707-4972

**Submission Address for Application Materials:**

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**Department Contacts:***Admissions:*

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tuspgrad@temple.edu

*Program Coordinator:*

Daniel J. Canney, PhD

tuspgrad@temple.edu

*Graduate Chairperson:*

Swati Nagar, PhD  
phscgrad@temple.edu

*Department Chairperson:*

Ellen Walker, PhD  
ellen.walker@temple.edu

## Pharmaceutical Sciences/ Medicinal Chemistry PhD

SCHOOL OF PHARMACY

Learn more about the Doctor of Philosophy in Pharmaceutical Sciences.

### About the Program

The School of Pharmacy offers a graduate program leading to the MS and to the PhD in Pharmaceutical Sciences with a concentration in Medicinal Chemistry. The program is designed to prepare students for positions in the pharmaceutical industry, government agencies, and as faculty in schools of pharmacy.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Health Sciences Center, Main

Some courses may be offered at the Fort Washington campus. Research must be carried out at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

**Full-Time/Part-Time Status:** Full-time status is recommended due to the nature of ongoing research.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and collaborations among faculty and students with interests in biochemistry, molecular modeling, organic chemistry and pharmacology.

**Areas of Specialization:** The focus is Medicinal and Pharmaceutical Chemistry, including design and synthesis of ligands for cholinergic receptors and ligands for retinoic acid receptors, novel anticonvulsants, and the development of analytical methodologies.

**Job Prospects:** The program primarily concentrates on providing research scientists for the pharmaceutical industry and government agencies, as well as faculty for schools of pharmacy.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Support options include University fellowships, teaching assistantships and research assistantships. Recipients are determined on a competitive basis during the admission process and receive a stipend and full tuition remission (up to 9 credits per term).

The principal duties of a Teaching Assistant (TA) include assisting faculty members in laboratory instruction, preparing apparatus or materials for PharmD students, conducting recitations, grading quizzes and reports, and proctoring exams. TAs are expected to work 20 hours per week.

A Research Assistant (RA) is expected to spend 20 hours per week engaged in research and is assigned to a specific faculty member. The research subjects are determined by consultation between the student and their research advisor.

Applications should include a statement of previous teaching and/or research experience, areas of interest, and future goals; official transcripts; and a curriculum vitae. The department attempts to make offers of assistantships on or before May 1. June 1 is the final date for acceptance or declination of department offers. Applications should be directed to:

Temple University School of Pharmacy  
3307 North Broad Street, Suite 528  
Philadelphia, PA 19140

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

All applications are evaluated together after the deadline.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and professionals in a supervisory position.

**Coursework Required for Admission Consideration:** It is recommended that applicants complete the courses (or their equivalent, as determined by the School of Pharmacy) to obtain a BS in Biochemistry, Chemistry (preferably Organic Chemistry), or Pharmacy before entering the program.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Biochemistry, Chemistry (preferably Organic Chemistry), or Pharmacy is required.

Transcripts from all post-secondary institutions attended may be sent electronically to [tuspgrad@temple.edu](mailto:tuspgrad@temple.edu). Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the School of Pharmacy's Office of Graduate Studies.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** In approximately 500 to 1,000 words, state your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Scores are expected to be in the 65th percentile or above.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the

exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 46

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8002	Pharmaceutical Analysis	3
PS 8051	Seminar in Pharm Science	1
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
PS 8129	Bioethics in Research	2
PS 8131	Principles of Biochemistry	4
PS 8403	Advanced Pharmacogenomics	2
STAT 5002	Introduction to Biostatistics	3
<b>Electives</b> <sup>1</sup>		<b>18</b>
<b>Research Courses</b> <sup>2</sup>		<b>6</b>
PS 9994	Preliminary Examination Preparation	
PS 9998	Pre-Dissertation Research	
PS 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>46</b>

<sup>1</sup>

Suggested electives include CHEM 4201 Organic Structure and Mechanisms, CHEM 5201 Physical Methods in Organic Chemistry, CHEM 5205 Organic Syntheses, and PS 8009 Advanced Medicinal Chemistry I. Electives should be taken primarily in Chemistry. Coursework in Biomedical Sciences, Computer and Information Science, and other disciplines is also permissible with guidance from the advisor.

<sup>2</sup>

Of the 6 required research credits, a minimum of 2 credits of PS 9999 must be taken. The other 4 credits may be taken in any combination of PS 9994, PS 9998, and PS 9999.

### Culminating Events:

*Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge in specialized areas of the discipline. The examination evaluates the student's ability to apply specific research foci to anticipated practical problems in the field. Students who accumulate 40 didactic credits are eligible to take the exam.

The preliminary exam consists of two sections. The first is a written section consisting of questions from the student's Doctoral Advisory Committee (DAC). Each member of the DAC submits a question and

then judges the quality of the student's answer based on criteria such as accuracy, thoroughness and originality. They then share that score and their rationale for it with the other members of the DAC. The evaluators look for a breadth and depth of understanding of concepts in the areas being tested, application of that knowledge, and the ability to write technical prose in a manner consistent with scientists in the field. The second section of the preliminary exam includes the preparation of a research proposal approved by the DAC and a 30-minute oral summary of the proposal followed by an oral defense of the proposal.

Students who are preparing to take their preliminary examination should confirm a time and date with the Director of Graduate Studies and register with the Administrative Assistant in the Office of Graduate Studies. The student and Director receive confirmation of the time, date, room and proctor for the examination.

#### *Dissertation Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of:

- the context and background surrounding a particular research problem;
- an exhaustive survey and review of literature related to the problem; and
- a detailed methodological plan for investigating the problem.

The proposal should be completed and approved no more than one year after completing the preliminary exam. Upon approval, a doctoral student is promoted to PhD candidacy, and a timeline for completing the investigation and writing process are established.

#### *Dissertation:*

The doctoral dissertation is an original, theoretical and/or empirical study that makes a significant contribution to the field. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The dissertation should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field; and be prepared for publication in a professional journal.

The Dissertation Examining Committee (DEC) is formed to oversee the student's doctoral research. It is charged with evaluating the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The DEC, which includes the members of the DAC, is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the School of Pharmacy. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the Committee members, and informing the student of their academic progress. At least one additional Graduate Faculty member from outside the School of Pharmacy must be included on the DEC. This outside examiner should be identified no later than the beginning of the academic term in which the student will defend the dissertation. The DEC members vote to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Committee compositions must be approved by the departmental graduate committee. If a student needs to change a member of a committee, the new member must be approved by the departmental graduate committee and by the Graduate School. The changes must be documented with the Administrative Assistant and the Graduate School using the "Request

for Change in Dissertation Committee" form, found in TUportal under the Tools tab within "University Forms."

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and register with the Office of Graduate Studies at least 15 days before the defense is to be scheduled. The Office of Graduate Studies arranges the time, date and room and forwards to the student the appropriate forms. After the Administrative Assistant has made the arrangements, the student must send the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense date. The department posts announcements for the defense.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/academics/phdms-pharmaceutical-sciences>

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#### *Program Coordinator:*

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#### *Graduate Chairperson:*

Swati Nagar, PhD  
phscgrad@temple.edu

#### *Department Chairperson:*

Ellen Walker, PhD  
ellen.walker@temple.edu

## Pharmaceutical Sciences/ Pharmaceutics PhD

SCHOOL OF PHARMACY

Learn more about the Doctor of Philosophy in Pharmaceutical Sciences.

### About the Program

The School of Pharmacy offers graduate program leading the MS and to the PhD in Pharmaceutical Sciences with a concentration in Pharmaceutics. The program is designed to prepare students for



positions in the pharmaceutical industry, government agencies, and as faculty in schools of pharmacy.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Health Sciences Center, Fort Washington

Some courses may be offered at Main campus. Research must be carried out at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

**Full-Time/Part-Time Status:** The PhD program is considered full-time. A minimum residency of one year is required during which the student must work full time in a laboratory at the School of Pharmacy under the direction of a faculty member in the department.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and collaborations among faculty and students with interests in biochemistry, molecular modeling, organic chemistry and pharmacology.

**Areas of Specialization:** Faculty members specialize and offer graduate coursework in controlled release dosage forms, drug metabolism, encapsulation, mechanisms of drug action, pharmaceutical analysis, pharmacokinetics and solid dosage forms.

**Job Prospects:** The program primarily concentrates on providing research scientists for the pharmaceutical industry and government agencies, as well as faculty for schools of pharmacy.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Support options include University fellowships, teaching assistantships and research assistantships. Recipients are determined on a competitive basis during the admission process and receive a stipend and full tuition remission (up to 9 credits per term).

The principal duties of a Teaching Assistant (TA) include assisting faculty members in laboratory instruction, preparing apparatus or materials for PharmD students, conducting recitations, grading quizzes and reports, and proctoring exams. TAs are expected to work 20 hours per week.

A Research Assistant (RA) is expected to spend 20 hours per week engaged in research and is assigned to a specific faculty member. The research subjects are determined by consultation between the student and their research advisor.

Applications should include a statement of previous teaching and/or research experience, areas of interest, and future goals; official transcripts; and a curriculum vitae. The department attempts to make offers of assistantships on or before May 1. June 1 is the final date for acceptance or declination of department offers. Applications should be directed to:

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3307 North Broad Street, Suite 528  
Philadelphia, PA 19140

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

All applications are evaluated together after the deadline.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and professionals in a supervisory position.

**Coursework Required for Admission Consideration:** Before entering the program, it is recommended that applicants complete courses (or their equivalent, as determined by the School of Pharmacy) in Mathematics, at least through differential equations, and Physical Chemistry.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Pharmacy, Biology, Biochemistry, Chemistry, Engineering or a related discipline is required.

Transcripts from all post-secondary institutions attended may be sent electronically to [tusgrad@temple.edu](mailto:tusgrad@temple.edu). Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the School of Pharmacy's Office of Graduate Studies.

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GRE: Scores are expected to be in the 65th percentile or above.

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- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 46

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8002	Pharmaceutical Analysis	3
PS 8051	Seminar in Pharm Science	1
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
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PS 8403	Advanced Pharmacogenomics	2
STAT 5002	Introduction to Biostatistics	3
<b>Electives</b> <sup>1</sup>		<b>18</b>
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PS 9994	Preliminary Examination Preparation	
PS 9998	Pre-Dissertation Research	
PS 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>46</b>

1

Suggested electives include PS 8003 Pharmaceutical Manufacturing I: Preformulation/Formulation, PS 8004 Solid Dosage Forms - Small Molecules, PS 8005 Pharmaceutical Biotechnology, PS 8006 Physical Pharmacy I, PS 8007 Applied Biopharmaceutics, PS 8008 Advanced Principles of Pharmacokinetics, and PS 8584 Advanced Drug and Gene Delivery Systems. Electives can be taken in Pharmaceutical Sciences, Biomedical Sciences, Computer and Information Science, and other disciplines with guidance from the advisor.

2

Of the 6 required research credits, a minimum of 2 credits of PS 9999 must be taken. The other 4 credits may be taken in any combination of PS 9994, PS 9998, and PS 9999.

### Culminating Events:

#### *Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge in specialized areas of the discipline. The examination evaluates the student's ability to apply specific research foci to anticipated practical problems in the field. Students who accumulate 40 didactic credits are eligible to take the exam.

The preliminary exam consists of two sections. The first is a written section consisting of questions from the student's Doctoral Advisory Committee (DAC). Each member of the DAC submits a question and then judges the quality of the student's answer based on criteria such as accuracy, thoroughness and originality. They then share that score and their rationale for it with the other members of the DAC. The evaluators look for a breadth and depth of understanding of concepts in the areas being tested, application of that knowledge, and the ability to write technical prose in a manner consistent with scientists in the field. The second section of the preliminary exam includes the preparation of a research proposal approved by the DAC and a 30-minute oral summary of the proposal followed by an oral defense of the proposal.

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#### *Dissertation Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of:

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- a detailed methodological plan for investigating the problem.

The proposal should be completed and approved no more than one year after completing the preliminary exam. Upon approval, a doctoral student is promoted to PhD candidacy, and a timeline for completing the investigation and writing process are established.

#### *Dissertation:*

The doctoral dissertation is an original, theoretical and/or empirical study that makes a significant contribution to the field. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The dissertation should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field; and be prepared for publication in a professional journal.

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Committee compositions must be approved by the departmental graduate committee. If a student needs to change a member of a committee, the new member must be approved by the departmental graduate committee and by the Graduate School. The changes must be documented with the Administrative Assistant and the Graduate School using the "Request for Change in Dissertation Committee" form, found in TUportal under the Tools tab within "University Forms."

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*Graduate Chairperson:*  
Swati Nagar, PhD  
phscgrad@temple.edu

*Department Chairperson:*  
Ellen Walker, PhD  
ellen.walker@temple.edu

## Pharmaceutical Sciences/ Pharmacodynamics PhD

SCHOOL OF PHARMACY

Learn more about the Doctor of Philosophy in Pharmaceutical Sciences.

### About the Program

The School of Pharmacy offers a graduate program leading to the MS and to the PhD in Pharmaceutical Sciences with a concentration in Pharmacodynamics. The program is designed to prepare students for positions in the pharmaceutical industry, government agencies, and as faculty in various departments performing biomedical research.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Health Sciences Center, Main

Some courses may be offered at the Fort Washington campus. Research must be carried out at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

**Full-Time/Part-Time Status:** Full-time status is recommended due to the nature of ongoing research.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and collaborations among faculty and students

with interests in biochemistry, molecular modeling, organic chemistry and pharmacology.

**Areas of Specialization:** The Pharmacodynamics concentration involves the study of integrated drug transport and mechanism of drug action research.

**Job Prospects:** Graduates generally accept employment offers shortly before or after defending their dissertation. Job opportunities for graduates include positions as postdoctoral researchers, scientists in the pharmaceutical industry, and faculty members in a variety of departments involved in biomedical research.

**Non-Matriculated Student Policy:** Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

**Financing Opportunities:** Support options include University fellowships, teaching assistantships and research assistantships. Recipients are determined on a competitive basis during the admission process and receive a stipend and full tuition remission (up to 9 credits per term).

The principal duties of a Teaching Assistant (TA) include assisting faculty members in laboratory instruction, preparing apparatus or materials for PharmD students, conducting recitations, grading quizzes and reports, and proctoring exams. TAs are expected to work 20 hours per week.

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Applications should include a statement of previous teaching and/or research experience, areas of interest, and future goals; official transcripts; and a curriculum vitae. The department attempts to make offers of assistantships on or before May 1. June 1 is the final date for acceptance or declination of department offers. Applications should be directed to:

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### Admission Requirements and Deadlines

#### Application Deadline:

*Fall:* December 15

All applications are evaluated together after the deadline.

*APPLY ONLINE to this graduate program.*

#### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and professionals in a supervisory position.

**Coursework Required for Admission Consideration:** It is recommended that applicants complete the courses (or their equivalent, as determined by the School of Pharmacy) to obtain a BS degree in Biochemistry, Biology, Pharmacology, Pharmacy or Psychology.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Biochemistry, Biology, Pharmacology, Pharmacy or Psychology is required.

Transcripts from all post-secondary institutions attended may be sent electronically to [tuspgrad@temple.edu](mailto:tuspgrad@temple.edu). Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the School of Pharmacy's Office of Graduate Studies.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** In approximately 500 to 1,000 words, state your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

#### Standardized Test Scores:

GRE: Scores are expected to be in the 65th percentile or above.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 46*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8002	Pharmaceutical Analysis	3
PS 8051	Seminar in Pharm Science	1
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
PS 8129	Bioethics in Research	2
PS 8131	Principles of Biochemistry	4
PS 8402	Pharmacodynamics	3
PS 8403	Advanced Pharmacogenomics	2
STAT 5002	Introduction to Biostatistics	3
<b>Electives</b> <sup>1</sup>		<b>15</b>
<b>Research Courses</b> <sup>2</sup>		<b>6</b>
PS 9994	Preliminary Examination Preparation	
PS 9998	Pre-Dissertation Research	

PS 9999	Dissertation Research
<b>Total Credit Hours</b>	
<b>46</b>	

1

Electives can be taken in Pharmaceutical Sciences, Biomedical Sciences, Biology, and other disciplines with guidance from the advisor.

2

Of the 6 required research credits, a minimum of 2 credits of PS 9999 must be taken. The other 4 credits may be taken in any combination of PS 9994, PS 9998, and PS 9999.

### Culminating Events:

#### *Preliminary Examination:*

The purpose of the preliminary examination is to demonstrate critical and interpretive knowledge in specialized areas of the discipline. The examination evaluates the student's ability to apply specific research foci to anticipated practical problems in the field. Students who accumulate 40 didactic credits are eligible to take the exam.

The preliminary exam consists of two sections. The first is a written section consisting of questions from the student's Doctoral Advisory Committee (DAC). Each member of the DAC submits a question and then judges the quality of the student's answer based on criteria such as accuracy, thoroughness and originality. They then share that score and their rationale for it with the other members of the DAC. The evaluators look for a breadth and depth of understanding of concepts in the areas being tested, application of that knowledge, and the ability to write technical prose in a manner consistent with scientists in the field. The second section of the preliminary exam includes the preparation of a research proposal approved by the DAC and a 30-minute oral summary of the proposal followed by an oral defense of the proposal.

Students who are preparing to take their preliminary examination should confirm a time and date with the Director of Graduate Studies and register with the Administrative Assistant in the Office of Graduate Studies. The student and Director receive confirmation of the time, date, room and proctor for the examination.

#### *Dissertation Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of:

- the context and background surrounding a particular research problem;
- an exhaustive survey and review of literature related to the problem; and
- a detailed methodological plan for investigating the problem.

The proposal should be completed and approved no more than one year after completing the preliminary exam. Upon approval, a doctoral student is promoted to PhD candidacy, and a timeline for completing the investigation and writing process are established.

#### *Dissertation:*

The doctoral dissertation is an original, theoretical and/or empirical study that makes a significant contribution to the field. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The dissertation should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field; and be prepared for publication in a professional journal.

The Dissertation Examining Committee (DEC) is formed to oversee the student's doctoral research. It is charged with evaluating the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The DEC, which includes the members of the DAC, is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the School of Pharmacy. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the Committee members, and informing the student of their academic progress. At least one additional Graduate Faculty member from outside the School of Pharmacy must be included on the DEC. This outside examiner should be identified no later than the beginning of the academic term in which the student will defend the dissertation. The DEC members vote to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Committee compositions must be approved by the departmental graduate committee. If a student needs to change a member of a committee, the new member must be approved by the departmental graduate committee and by the Graduate School. The changes must be documented with the Administrative Assistant and the Graduate School using the "Request for Change in Dissertation Committee" form, found in TUportal under the Tools tab within "University Forms."

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and register with the Office of Graduate Studies at least 15 days before the defense is to be scheduled. The Office of Graduate Studies arranges the time, date and room and forwards to the student the appropriate forms. After the Administrative Assistant has made the arrangements, the student must send the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense date. The department posts announcements for the defense.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/academics/phdms-pharmaceutical-sciences>

### Department Information:

Dept. of Pharmaceutical Sciences Office of Graduate Studies  
School of Pharmacy  
3307 N. Broad Street, Suite 528  
Philadelphia, PA 19140  
tuspgrad@temple.edu  
215-707-4972

### Submission Address for Application Materials:

[https://apply.temple.edu/PHARM\\_GRAD/](https://apply.temple.edu/PHARM_GRAD/)

### Department Contacts:

*Admissions:*  
Sophon Din  
tuspgrad@temple.edu

*Program Coordinator:*  
Daniel J. Canney, PhD  
tuspgrad@temple.edu

*Graduate Chairperson:*

Swati Nagar, PhD  
phscgrad@temple.edu

*Department Chairperson:*

Ellen Walker, PhD  
ellen.walker@temple.edu

## Pharmaceutical Sciences/ Regulatory Affairs and Quality Assurance PhD

SCHOOL OF PHARMACY

Learn more about the Doctor of Philosophy in Pharmaceutical Sciences.

### About the Program

The School of Pharmacy offers a graduate program leading to the PhD in Pharmaceutical Sciences with a concentration in Regulatory Affairs and Quality Assurance (RAQA). Emphasis is placed on combining scientific principles and methodology with regulatory and quality practices to streamline the discovery, manufacturing, safety profiling and post-approval processes. The program applies academic research methods to current industry regulatory issues, enabling candidates to pursue a dissertation that helps to define and resolve regulatory or quality problems with data research and scientific methodology. The goal of each dissertation is to present new and thoughtful answers to industry questions and problems that result in cost savings, safer and/or more effective products, better safety profiles, and other benefits for patients and manufacturers.

The RAQA concentration is designed for professionals who have a minimum of 15 years of relevant work experience, including supervisory responsibilities, in pharmaceutical and related sciences and/or regulation in such areas as analytical methods, clinical and pharmacovigilance supervision, corporate drug development or manufacturing science, quality practices, validation implementation, and other pertinent industry practices that draw heavily on regulatory policy and quality assurance. Work experience must be applicable to the topic candidates plan to investigate for their dissertation.

Selection is highly competitive as a very limited number of candidates is accepted each year. Successful candidates are expected to have:

- a master's degree or the equivalent in a pharmaceutical, science, medical, engineering or related field;
- a minimum of 15 years of work experience in the field related to their PhD dissertation;
- current work experience that can be applied to the regulatory/quality topic to be investigated for their PhD dissertation;
- the ability to work both independently and as part of a team, displaying recognizable initiative;
- a willingness to pursue original, independent research, utilizing a multidisciplinary approach to problem solving;
- strong communication skills, both verbal and written, including the ability to write academic research papers containing original thought and cogent arguments;
- basic knowledge of data analysis, having completed at least one course in statistical methods; and

- the ability to accept constructive criticism and welcome feedback provided by the Dissertation Advisor and Dissertation Advisory Committee.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Health Sciences Center, Fort Washington

Courses may also be offered at Main campus. Research must be carried out, however, at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

**Full-Time/Part-Time Status:** The degree is completed on a part-time basis in 2 to 5 years. Successful candidates are expected to pursue the PhD program at least two terms every academic year (Fall, Spring or Summer) until the dissertation is completed. Typically, students pursue the PhD every Fall and Spring term, but a Summer term may be substituted. Note that a minimum of one credit each Fall and Spring term is required to maintain the candidate's active student status.

**Job Prospects:** Job opportunities include positions as postdoctoral researchers, scientists in the pharmaceutical industry, and faculty members.

**Non-Matriculated Student Policy:** Non-matriculated students are ineligible for participation in the program.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

All applications are evaluated together after the deadline. Selection is highly competitive. A very limited number of candidates is accepted each year.

*APPLY to this graduate program,* submitting the application to RAQAPHD@temple.edu.

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and/or professionals in a supervisory position.

**Master's Degree in Discipline/Related Discipline:** A master's degree or equivalent is required in a pharmaceutical, science, medical, engineering or related field. Course credits achieved in the master's degree may be applied toward the PhD program's credit requirements.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required.

Transcripts from all post-secondary institutions attended may be sent electronically to RAQAPHD@temple.edu. Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the Regulatory Affairs and Quality Assurance Graduate Program.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** In approximately 500 to 1,000 words, state your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

**Other Requirement:** It is recommended that applicants provide a commitment statement from their employer indicating that the employer supports the individual's involvement in the RAQA PhD program.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 40

*Required Courses:*

Code	Title	Credit Hours
<b>Graduate-level coursework completed while earning a pharmaceutical, science, medical, engineering or related degree</b> <sup>1</sup>		<b>30</b>
<b>Coursework beyond the MS degree</b>		
PS 8051	Seminar in Pharm Science	1
Graduate-level course in Data Science, Data Analytics, or Healthcare Analytics <sup>2</sup>		3
Additional coursework as required by the Dissertation Advisor and School of Pharmacy Graduate Committee <sup>3</sup>		
<b>Research Courses</b>		
PS 9998	Pre-Dissertation Research (2 terms)	4
PS 9999	Dissertation Research (2 terms)	2
<b>Total Credit Hours</b>		<b>40</b>

1

The School of Pharmacy accepts up to 30 credits. The decision of the School on the number of credits accepted is final.

2

A minimum of one 3-credit graduate-level course is to be completed. This coursework is related to decision analysis, quantitative methods, research design, scientific decision-making, statistics and probability for data analysis, and the like.

3

The number of credits accepted toward the PhD and the number required for completion of the PhD are determined by the Dissertation Advisor and the Graduate Committee of the School of Pharmacy. It may be determined that additional coursework is required to prepare the student to write the dissertation. The course grid below lists approved course options.

## Additional Approved Coursework Options <sup>1</sup>

Code	Title	Credit Hours
PS 5451	Statistical Quality Control	3
	or QARA 5627 Statistical Design of Experiments (DOE)	
PS 8005	Pharmaceutical Biotechnology	3
QARA 5473	Generic Drug Regulation (ANDAs)	3
QARA 5474	Process Validation <sup>2</sup>	3
	or QARA 5498 Computerized System Validation	
QARA 5492	Production of Sterile Parenterals <sup>3</sup>	3
	or QARA 5493 Sterilization Processes	
QARA 5496	Regulation of Medical Devices: Compliance <sup>4</sup>	3
	or QARA 5502 Regulation of Medical Devices: Submissions	
QARA 5503	Design Controls for Medical Devices and Combination Products	3
	or QARA 5548 Risk Management of Pharmaceutical and Medical Devices	
QARA 5508	Good Pharmacovigilance Operations	3
	or QARA 5538 Clinical Drug Safety and Pharmacovigilance	
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	3
QARA 5513	Active Pharmaceutical Ingredients (APIs)	3
	or QARA 5546 Global Pharmaceutical Excipient Regulation	
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	3
QARA 5532	Global Labeling Regulation: Principles and Practices	3
QARA 5544	Regulatory Intelligence	3
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	3
QARA 5574	Pharmaceutical Quality Management Systems	3
	or QARA 5575 Regulatory Sciences: Managing the Guidelines to Quality	
QARA 5576	Global CMC Issues and Regulatory Dossier	3
	or QARA 5577 Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	
QARA 5578	Benefit Risk Management and Safety Signaling of Healthcare Products <sup>5</sup>	3
	or QARA 5579 Regulatory and Legal Basis of Pharmacovigilance	
QARA 5618	Clinical Data Management (CDM)	3
QARA 5650	Special Topics in Regulatory Affairs and Quality Assurance <sup>6</sup>	3
QARA 5655	Analytical Chemistry in Pharmaceutical Laboratories	3
	or QARA 8002 Pharmaceutical Analysis	
QARA 8003	Preformulation - Small Molecules	3
	or QARA 8004 Pharmaceutical Manufacturing II: Solid Dosage Forms	

1

Other coursework in Regulatory Affairs and Quality Assurance may also be assigned by the Dissertation Advisor.

2

QARA 5478 High Purity Water Systems is a third choice.

3

PS 5501 Development of Sterile Products is another option.

4

QARA 5505 Global Regulation of Medical Devices is also approved.

5

QARA 5591 Global Regulatory Affairs can also be selected.

6

QARA 5650 may only be taken with departmental approval.

**Other Requirement:** Formal evaluation of each PhD student's progress occurs at the end of the first year and each year thereafter to ensure that the quality of work will result in a fully approved dissertation project. Failure to conduct a reasonable amount of research or writing could result in suspension or dismissal from the program. The following is a typical dissertation schedule:

*Year 1:*

- Assess dissertation proposal topic, including candidate's knowledge span to determine strengths and deficiencies.
- Determine additional coursework required, if any.
- Review candidate's past work and publications as they pertain to the PhD dissertation.
- Select final dissertation topic and possible research protocol.
- Outline dissertation proposal, research protocol and introductory chapter by Year 1's end.
- Meet with research advisor as required and recommended.

*Years 2-4:*

- Pursue research activities to depict quantitative, qualitative and policy analysis methods, including literature review and annotated bibliography.
- Prepare dissertation introduction, discussion and conclusion.

*Final Year:*

- Prepare dissertation material for one or more publications.
- Defend dissertation as required by the School of Pharmacy.

### **Culminating Events:**

#### *Dissertation Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of:

- the context and background surrounding a particular research problem;
- an exhaustive survey and review of literature related to the problem; and
- a detailed methodological plan for investigating the problem.

Upon approval of the dissertation proposal, the doctoral student is promoted to PhD candidacy, and a timeline for completing the investigation and writing process is established.

#### *Dissertation:*

The doctoral dissertation is an original, theoretical and/or empirical study that makes a significant contribution to the field. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The dissertation should be rigorously investigated; uphold the ethics and standards of the field; demonstrate an understanding of the relationship between the primary area of interest and the broader field; and be prepared for

publication in a professional journal. It is expected that the dissertation will consist of an appropriate mix of quantitative and qualitative research methodology and be suitable for publication.

The Dissertation Examining Committee (DEC) is formed to oversee the student's doctoral research. It is charged with evaluating the student's dissertation and oral defense, including the student's ability to express verbally their research question, methodological approach, primary findings and implications. The DEC, which includes the members of the DAC, is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the School of Pharmacy. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the Committee members, and informing the student of their academic progress. At least one additional Graduate Faculty member from outside the School of Pharmacy must be included on the DEC. This outside examiner should be identified no later than the beginning of the academic term in which the student will defend the dissertation. The DEC members vote to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Committee compositions must be approved by the departmental graduate committee. If a student needs to change a member of a committee, the new member must be approved by the departmental graduate committee and by the Graduate School. The changes must be documented with the Administrative Assistant and the Graduate School using the "Request for Change in Dissertation Committee" form, found in TUportal under the Tools tab within "University Forms."

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and register with the Office of Graduate Studies at least 15 days before the defense is to be scheduled. The Office of Graduate Studies arranges the time, date and room and forwards to the student the appropriate forms. After the Administrative Assistant has made the arrangements, the student must send the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense date. The department posts announcements for the defense.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/academics/phdms-pharmaceutical-sciences>

### Department Information:

Dept. of Pharmaceutical Sciences Office of Graduate Studies  
School of Pharmacy  
3307 N. Broad Street, Suite 528  
Philadelphia, PA 19140  
tuspgrad@temple.edu  
215-707-4972

### Submission Address for Application:

RAQAPHD@temple.edu

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

## Department Contacts:

### Admissions:

Sophon Din  
tuspgrad@temple.edu

### RAQA Academic Coordinator:

Peter H. Doukas, PhD  
RAQAPHD@temple.edu

### Graduate Chairperson:

Swati Nagar, PhD  
phscgrad@temple.edu

### Department Chairperson:

Ellen Walker, PhD  
ellen.walker@temple.edu

## Pharmacy PharmD

### SCHOOL OF PHARMACY

Learn more about the Doctor of Pharmacy.

## About the Program

Temple University School of Pharmacy, established in 1901, carries far more than a century's worth of history and reliability in pharmacy education. The Doctor of Pharmacy (PharmD) degree program trains pharmacists who pursue career paths in community pharmacy, hospital pharmacy, long-term care, managed care, the pharmaceutical industry, government and more.

The PharmD curriculum prepares one to capably and confidently deliver pharmacy care in all practice settings. Students engage with faculty in large and small classes, labs and guided simulations. Introductory Pharmacy Practice Experiences (IPPE), scheduled during the first three years of the program, and Advanced Pharmacy Practice Experiences (APPE) in the fourth year allow students to gain real-world supervised experience as members of the healthcare team. Students are introduced to a variety of environments to help them decide on their first step in their pharmacy career.

Specialization can mean differentiation in the job market. Elective tracks in Clinical Trials, Drug Safety, and Advanced Clinical Practice allow students to customize their degree based on their interests. Earn credits toward a Master of Science degree in Global Clinical and Pharmacovigilance Regulations or a Master of Business Administration degree from the Fox School of Business and Management while completing the PharmD program.

An abundance of extracurricular activities complement academics. The School of Pharmacy hosts and supports student chapters of all major pharmacy associations, recurring professional and social events, clinical mission trips and other opportunities toward becoming a well-rounded professional. The School of Pharmacy Alumni Association is a built-in network committed to helping graduates assimilate in the professional world.

The School of Pharmacy is located on the Temple University Health Sciences Center campus in Philadelphia, along with Temple University Hospital, Lewis Katz School of Medicine, Maurice H. Kornberg School of Dentistry, and the College of Public Health. Favorite facilities on campus include the Student Faculty Center with recreation and study areas, the



Temple University Hospital Cafeteria, and the Research Library at the Lewis Katz School of Medicine.

The Temple University School of Pharmacy's PharmD program offers the chance to pursue excellence and opportunity in education, scholarship, research and practice.

**Time Limit for Program Completion:** 4 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** The program may be completed on a full-time basis.

## Admission Requirements and Deadline

**Application Deadline:** March 1

APPLY ONLINE to this program via PharmCAS.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A bachelor's degree is not required, but applicants must complete the prerequisites for the PharmD program. Visit <https://pharmacy.temple.edu/admissions/apply/pharmd> for specific information regarding the application process.

**Prerequisites for the PharmD Program:** All applicants are required to complete and pass the coursework identified below at either Temple University or another fully accredited institution of higher learning regardless of how many years of pre-pharmacy coursework was taken before starting the professional PharmD degree program.

All prerequisites must be completed before beginning the PharmD program, but application can be made while still taking prerequisites. It is important to appropriately list coursework that is still in progress when applying through PharmCAS.

Note that if your institution uses a quarter system instead of a semester system, you can multiply the number of credits you have by 0.66 to translate them into semester hours. Round partial credits of 0.5 and above up to the next semester hour; round credits of 0.4 and below down.

Code	Title	Credit Hours
<b>Math Discipline</b>		
	Calculus I	4
<b>Science Discipline</b>		
	Anatomy/Physiology I <sup>1</sup>	3-4
	Anatomy/Physiology II <sup>1</sup>	3-4
	Biology I <sup>2</sup>	3
	Biology I Lab	1
	Biology II <sup>2</sup>	3
	Biology II Lab	1
	General Chemistry I	3
	General Chemistry I Lab	1
	General Chemistry II	3
	General Chemistry II Lab	1
	Organic Chemistry I	3
	Organic Chemistry I Lab	1

Organic Chemistry II	3
Organic Chemistry II Lab	1
Physics I <sup>3</sup>	3
Physics I Lab	1

### English Discipline

Analytical Reading and Writing English Composition <sup>4</sup>	3-4
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### Economics Discipline

Microeconomics or Macroeconomics	3
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### Electives

Complete a minimum of 18 credits in the following disciplines, meeting the stated minimums: <sup>5</sup> 18

### Social Sciences Discipline

Complete a minimum of 6 credits from at least two different departments:

Anthropology
Geography
History
Political Science
Psychology
Religion
Sociology

### Humanities Discipline

Complete a minimum of 6 credits from at least two different departments:

Architecture
Communication/Public Speaking
Fine Arts
Languages
Literature
Literature/Classics
Philosophy

### Mathematics Discipline

Statistics recommended	
<b>Total Credit Hours</b>	<b>62-65</b>

1

An Anatomy/Physiology Lab is not required.

2

Biology I must be equivalent to BIOL 1111 and Biology II must be equivalent to BIOL 2112 at Temple University. For details, refer to the Temple University Course Catalog.

3

A non-calculus-based Physics course is acceptable.

4

Analytical Reading and Writing English Composition may be taken in the Fall or Spring semester. Students taking a course for ESL students are required to take an additional English course, which may be counted as a Humanities Elective.

5

Temple students are advised to select courses within each of the GenEd areas.

## Program Requirements

### General Program Requirements:

Number of Credits Required: 140

#### Required Courses:

Year 1		
Fall		Credit Hours
PP P140	Professional Practice	1
PP P145	Immunology/Biotechnology	3
PP P146	Drug Information	1
PS P151	Medicinal Chemistry I	4
PS P155	Principles of Infectious Diseases	3
PS P161	Pharmaceutics I	3
PS P171	Pharmacy Lab I	1
<b>Credit Hours</b>		<b>16</b>
Spring		
PP P136	IPPE 1 <sup>1</sup>	2
Community Pharmacy Experience Faculty Shadow/Reflection IPE Workshops <sup>2</sup>		
PP P142	Soc & Econ Aspcts/Hlthcare	2
PP P148	Introduction to Pharmacy Care	2
PS P152	Medicinal Chemistry II	4
PS P162	Pharmaceutics II	3
PS P164	Pharmacology	4
PS P172	Pharmacy Lab II	1
Self-Selected Co-Curricular Activity (CPD) <sup>3</sup>		
<b>Credit Hours</b>		<b>18</b>
Year 2		
Fall		Credit Hours
PP P233	Path/Ther Cardiopulm I <sup>4</sup>	3
PP P235	Pathophysiology/Therapeutics: Pediatrics <sup>4</sup>	1
PP P239	Pharm Care Rec I	1
PP P248	Communication Skills	1
PS P251	Medicinal Chemistry III and Natural Products	4
PS P261	Concepts in Pharmacogenomics	3
PS P265	Pharmacology II	3
PS P271	Pharmacy Lab III	1
Self-Selected Co-Curricular Activity (CPD) <sup>3</sup>		
<b>Credit Hours</b>		<b>17</b>
Spring		
PP P234	Path/Ther Cardiopulm II <sup>4</sup>	2
PP P236	IPPE 2 <sup>1</sup>	2
Disaster Planning POD Hospital Pharmacy IPE Workshop and IPE Community Service Activity PY-4 Student Shadow/Reflection		
PP P237	Path/Ther Endocr/Meta Di <sup>4</sup>	3
PP P246	Pharm Care Rec II	1
PP P254	Bio Stat/Med Lit Eval	2
PP P260	Contemporary Pharmacy	2

PP P280	Pharmacist Directed Care	3
PS P262	Pharmacokinetics	3
PS P272	Pharmacy Lab IV	1
Self-Selected Co-Curricular Activity (CPD) <sup>3</sup>		

**Credit Hours 19**

Year 3		
Fall		Credit Hours
PP P312	ADRS Organ Systems Appr	2
PP P321	Pathophysiology/Therapeutics Neurology/ Psychiatry <sup>4</sup>	3
PP P325	Pathophysiology/Therapeutics - Infectious Diseases <sup>4</sup>	3
PP P347	Pharm Care Rec III	1
PP P352	Economics of Pharm Pract	3
Electives <sup>5</sup>		4
Self-Selected Co-Curricular Activity (CPD) <sup>3</sup>		

**Credit Hours 16**

Spring		
PP P313	Clin Pharmacokinetics	3
PP P323	Pathophysiology/Therapeutics of Oncology and Immunology <sup>4</sup>	3
PP P336	IPPE 3 <sup>1</sup>	2
Inpatient or Clinic - Patient and Interprofessional Communications IPE Community Service Activity		
PP P338	Pathophysiology/Therapeutics - Gastroenterology/ Nutrition and Renal Disorders <sup>4</sup>	3
PP P341	Pharmacy Law	2
PP P348	Pharm Care Rec IV	1
Electives <sup>5</sup>		4
Self-Selected Co-Curricular Activity (CPD) <sup>3</sup>		

**Credit Hours 18**

Year 4		
Fall		Credit Hours
Advanced Pharmacy Practice Experience (APPE) <sup>6</sup>		6
Advanced Pharmacy Practice Experience (APPE) <sup>6</sup>		6
Advanced Pharmacy Practice Experience (APPE) <sup>6</sup>		6

**Credit Hours 18**

Spring		
Advanced Pharmacy Practice Experience (APPE) <sup>6</sup>		6
Advanced Pharmacy Practice Experience (APPE) <sup>6</sup>		6
Advanced Pharmacy Practice Experience (APPE) <sup>6</sup>		6

**Credit Hours 18**

**Total Credit Hours 140**

1

During the first through third professional years of study, students are required to complete a total of 300 hours of Introductory Pharmacy Practice Experiences (IPPEs). These hours may be scheduled throughout the year.

2

Students are required to complete the Interprofessional Education (IPE) workshops, simulations and community service activities as outlined in the IPPE manual.

3

"CPD" indicates Continuing Personal/Professional Development.

4

The Pathophysiology and Therapeutics (P/T) courses are offered sequentially in each semester.

5

During the third year of professional study at Temple University School of Pharmacy, students may begin to differentiate their degree by choosing electives in one of the following tracks: Advanced Clinical Practice, Clinical Trials, and Drug Safety. Students are required to take a minimum of 8 elective credits but may choose to take up to 12 elective credits.

6

All students are required to complete six 6-week Advanced Pharmacy Practice Experiences (APPEs) and are awarded 6 credits for each experience. These rotations are scheduled throughout the student's fourth professional year (May-May).

#### **Additional Requirements:**

- All PY-3 students are required to take the PCOA Exam scheduled during the Spring semester. Students must pass the Frequently Prescribed Medication Competency Exam in the semester prior to starting the APPE component of the curriculum.
- PY-4 students are required to pass the six Qualifying Exams and to take the online Pre-NAPLEX Practice Test.

## **Contacts**

### **Program Web Address:**

<https://pharmacy.temple.edu/academics/pharmd>

### **Department Information:**

Office of Professional Admissions  
Temple University School of Pharmacy  
3307 N. Broad Street, Suite 141  
Philadelphia, PA 19140

### **Submission Address for Application Materials:**

<https://www.pharmcas.org/>

### **Mailing Address for Application Materials:**

Office of Professional Admissions  
Temple University School of Pharmacy  
3307 N. Broad Street, Suite 141  
Philadelphia, PA 19140

### **Department Contacts:**

*Admissions:*  
Joan Hankins  
Director of Admissions  
[joan.hankins@temple.edu](mailto:joan.hankins@temple.edu)  
215-707-4900

# **Regulatory Affairs and Quality Assurance MS**

SCHOOL OF PHARMACY

Learn more about the Master of Science in Regulatory Affairs and Quality Assurance.

## **About the Program**

Since its establishment in 1968, Temple's Regulatory Affairs and Quality Assurance (RAQA) program has played a significant role in training pharmaceutical company personnel in regulations and quality principles and practices. Coursework meets the career requirements of professionals in the pharmaceutical and related industries. The program provides students with a broad knowledge of the industry, fostering their professional development and preparing them for supervisory and managerial positions.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. The MS is offered in its entirety on evenings and weekends at Fort Washington.

**Interdisciplinary Study:** The program fosters interdisciplinary study between the pharmaceutical sciences and technology.

**Affiliation(s):** Each year the program sponsors a major conference with the pharmaceutical industry and the U.S. Food and Drug Administration (FDA), focusing on current regulatory and quality issues.

**Ranking:** Temple's RAQA master's degree is widely recognized as the oldest, most comprehensive, and most respected academic program of its type in the world.

**Areas of Specialization:** This is a non-thesis MS program. Faculty members are specialists in many areas, such as auditing; clinical trial management and operations; global regulation; IND/NDA submissions; manufacturing; pharmaceutical, food and device law; pharmaceutical labeling and advertising; quality assurance; regulatory affairs; and validation.

**Job Prospects:** Students find positions in all areas of the pharmaceutical industry, including big Pharmaceutical Research and Manufacturers of America (PhRMA) and generic companies, biotechnology, clinical research organizations, and medical devices and packaging. Employment is also found with government agencies, including the FDA, and healthcare providers.

**Non-Matriculated Student Policy:** Students may complete a maximum of 9 credits before they must formally apply for admission. Before taking any electives, new students are strongly encouraged to take QARA 5459 Drug Development and QARA 5592 Food and Drug Law.

**Financing Opportunities:** Students in the RAQA MS program are generally working professionals. Therefore, funding for assistantships and academic internships is limited.

## **Admission Requirements and Deadlines**

**Application Deadline:**

*Fall:* March 1; December 15 international  
*Spring:* November 1; September 1 international  
*Summer I:* March 1; January 15 international

Applications are processed throughout the year. Late applications may be considered for admission. However, the entire application packet must be received by the Regulatory Affairs and Quality Assurance Graduate Studies Office before it is reviewed by the Admissions Committee. Applicants are responsible for making sure that all materials have been received.

APPLY to this graduate program, submitting the application to QARA2@temple.edu.

**Letters of Reference:**

Number Required: 2

*From Whom:* One letter should be obtained from the candidate's direct supervisor, indicating that the supervisor is aware of and supports the candidate's involvement in Temple's RAQA graduate program.

**Bachelor's Degree in Discipline/Related Discipline:** A BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline is required.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

**Statement of Goals:** Describe your experience in the pharmaceutical or related industries, indicating how the RAQA MS program will help you achieve your career objectives.

**Standardized Test Scores:**

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

**Resume:** Current resume or CV required.

**Transfer Credit:** Students may transfer a maximum of 6 credits into the MS program. These credits must be similar or identical to courses offered in Temple's RAQA program. In addition, the student must request the transfer credits at the time of application to the MS program, providing copies of course syllabi. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 36

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3

QARA 5494	Quality Audit	3
or QARA 5495	Investigational New Drug/New Drug Application Submissions	
QARA 5592	Food and Drug Law	3
<b>Good Practices Course</b>		
Select one from the following:		3
QARA 5476	Good Laboratory Practices	
QARA 5477	Good Manufacturing Practices	
QARA 5479	Advanced Good Manufacturing Practices - Defining "c"	
QARA 5536	Good Clinical Practices	
<b>Electives <sup>1</sup></b>		<b>24</b>
<b>Total Credit Hours</b>		<b>36</b>

<sup>1</sup>

Upon completion of the four required courses, students may concentrate their electives in either Regulatory Affairs or in Quality Assurance. Alternately, students may select courses from both disciplines to broaden their portfolio.

**Culminating Event:** Successful completion of coursework is required to earn the MS in Regulatory Affairs and Quality Assurance.

## Contacts

### Program Web Address:

<https://pharmacy.temple.edu/raqa/programs-degrees-certificates/raqa-ms-degree>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
 425 Commerce Drive, Suite 175  
 Fort Washington, PA 19034-2728  
 qara@temple.edu  
 267-468-8560

### Submission Address for Application:

QARA2@temple.edu

### Mailing Address for Application Materials:

Temple University  
 Regulatory Affairs and Quality Assurance Graduate Program  
 425 Commerce Drive, Suite 175  
 Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
 Wendy Lebing, MALD, MS  
 Assistant Dean  
 qara@temple.edu  
 267-468-8560

*Graduate Chairperson:*  
 Swati Nagar, PhD  
 phscgrad@temple.edu

*Assistant Dean:*  
 Wendy Lebing, MALD, MS  
 wlebing@temple.edu

267-468-8560

## Graduate Certificate: Basic Pharmaceutical Development

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Basic Pharmaceutical Development.

### About the Certificate

Professionals with business or other non-science degrees may want to enter or advance their careers in the pharmaceutical industry but need specialized training in its terminology, concepts and regulatory environment. Whether just entering the workforce or looking for ways to advance in a global corporation, they can benefit from a deeper understanding of how pharmaceutical products are discovered, manufactured and distributed, as well as a greater familiarity with the multitude of federal and international regulations governing every aspect of product quality.

The graduate certificate in Basic Pharmaceutical Development combines a general overview of the drug development process with pharmaceutical industry business practices. This certificate enables students to explore quality assurance and regulatory affairs as a prospective career path without committing to a master's degree. Students are exposed to the specialized language of the industry, the overriding concern for imbuing quality in the industry, and the regulations that directly impact industry business decisions.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

### Admission Requirements and Deadlines

#### Application Deadline:

Fall and Spring admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution of higher learning. A science degree is not mandatory.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5472	Pharmaceutical Marketing	3
<b>Electives</b>		
Select two from the following:		6
QARA 5408	Pharmacoeconomics	
QARA 5495	Investigational New Drug/New Drug Application Submissions	
QARA 5533	Requirements for Product Labeling and Advertising	
QARA 5592	Food and Drug Law	
QARA 5615	Project Management for Pharmaceutical Professionals	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/basic-pharmaceutical-development>

#### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

#### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

#### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Graduate Certificate: Biologics and Biosimilars Manufacturing

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Biologics and Biosimilars Manufacturing.

### About the Certificate

Given the rapidly expanded development of biopharmaceuticals in the past decade, an immediate need exists for professionals with knowledge of and credentials in key manufacturing quality issues governing biologics

and biosimilar drugs. The graduate certificate in Biologics and Biosimilars Manufacturing requires the completion of coursework focusing on how biologics and biosimilars are manufactured, looking specifically at regulatory compliance elements, fundamentals of Quality by Design (QbD) and Statistical Process Control (SPC). Chemistry, Manufacturing and Controls (CMC) strategies, including materials sourcing and testing requirements, are also studied. Discussions include the technologies used in manufacturing and the unique considerations that arise when dealing with such technologies as cell and gene therapies, therapeutic monoclonal antibodies, vaccines, cytokines, antisense technology, interference RNA and growth factors.

**Time Limit for Certificate Completion:** 4 years, with courses meeting for a minimum of 36 class contact hours over 10 or 12 consecutive weeks

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biology, Chemistry, Engineering, Pharmacy, Physics or related field.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8005	Pharmaceutical Biotechnology	3
QARA 5471	Biotechnology: Bioprocess Basics <sup>1</sup>	3
QARA 5515	Biologics/Biosimilars: A Regulatory Overview <sup>1</sup>	3
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	3
<b>Elective</b>		
Select one from the following:		3
PS 5501	Development of Sterile Products	
QARA 5000	Special Topics in Regulatory Affairs and Quality Assurance <sup>2</sup>	
QARA 5451	Statistical Quality Control	
QARA 5468	Validation of Facilities, Utilities and Equipment (FUE)	
QARA 5474	Process Validation	

QARA 5479 Advanced Good Manufacturing Practices - Defining "c"

QARA 5492 Production of Sterile Parenterals

QARA 5493 Sterilization Processes

QARA 5512 Microbiological Concepts in Pharmaceutical Manufacturing

QARA 5516 Cleaning Validation

QARA 5572 Vaccines: Regulatory Affairs and Quality Assurance Issues

QARA 5627 Statistical Design of Experiments (DOE)

QARA 5629 Process Monitoring

**Total Credit Hours**

**15**

1

With prior written approval of the RAQA Office, students with demonstrated experience in biotechnology or biologics/biosimilar regulatory aspects may substitute an elective for QARA 5471 or QARA 5515.

2

Before taking QARA 5000 Special Topics in Regulatory Affairs and Quality Assurance as an elective, students must receive prior written approval from the RAQA Office to ensure that the course content focuses specifically on biologics and biosimilars.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/programs-degrees-certificates/certificate-programs/pre-masters-certificates/biologics-and-biosimilars-manufacturing-certificate%C2%A0>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

# Graduate Certificate: Biologics and Biosimilars: Regulatory Aspects

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Biologics and Biosimilars: Regulatory Aspects.

## About the Certificate

Given the rapidly expanded development of biopharmaceuticals in the past decade, an immediate need exists for professionals with knowledge of and credentials in U.S. and global regulations governing biologics and biosimilar drugs. The graduate certificate in Biologics and Biosimilars: Regulatory Aspects explores the regulatory, strategic, technical and scientific issues that are unique to biologics and biosimilar drug manufacturers.

Discussions include the clinical, manufacturing, regulatory and strategic issues that challenge the global commercialization pathways of biological products, as well as current technical and scientific issues involved in developing biological products in major regions of the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH). Questions such as how biologics and biosimilars differ from chemically synthesized drugs and the unique analytical methods used to characterize biologics, as opposed to small molecule testing, are covered. Topics include Quality by Design (QbD) principles relating to development, manufacturing and testing of biologics. Three required courses review the drug development process, biologic and biosimilar regulations, as well as global Chemistry, Manufacturing and Controls (CMC) issues for biologics. Depending on career focus, students may select electives in sterile products (such as vaccines), pharmacovigilance issues, clinical issues or regulatory eSubmissions.

The Biologics and Biosimilars: Regulatory Aspects certificate may be pursued on its own or as part of the Regulatory Affairs and Quality Assurance MS (p. 754).

**Time Limit for Certificate Completion:** 4 years, with courses meeting for a minimum of 36 class contact hours over 10 or 12 consecutive weeks

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biology, Chemistry, Engineering, Pharmacy, Physics or related field.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	3
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	3
<b>Electives</b>		
Select two from the following:		6
PS 5492	Production of Sterile Products	
QARA 5514	Regulatory eSubmissions	
QARA 5538	Clinical Drug Safety and Pharmacovigilance	
QARA 5571	Post-Marketing Safety Surveillance	
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	
QARA 5650	Special Topics in Regulatory Affairs and Quality Assurance <sup>1</sup>	
<b>Total Credit Hours</b>		<b>15</b>

<sup>1</sup>

Before taking QARA 5650 Special Topics in Regulatory Affairs and Quality Assurance as an elective, students must receive prior written approval from the RAQA Office to ensure that the course content focuses specifically on biologics and biosimilars.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/biologics-and-biosimilars-regulatory-aspects%C2%A0>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS

Assistant Dean  
qara@temple.edu  
267-468-8560

## Graduate Certificate: Biopharmaceutical Manufacturing and Regulatory Affairs

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Biopharmaceutical Manufacturing and Regulatory Affairs.

### About the Certificate

The graduate certificate in Biopharmaceutical Manufacturing and Regulatory Affairs is intended to enable Regulatory Affairs and Quality Assurance (RAQA) students to receive formal recognition for studying the highly specialized, rapidly growing field of pharmaceutical biotechnology, which includes the manufacturing techniques and applicable regulations used in the development and production of biotechnology products. The first biopharmaceutical product, namely, recombinant human insulin, was approved in 1982. Since then, products derived through biotechnology have provided advances in medicine that include therapeutic monoclonal antibodies, cancer vaccines, cytokines, antisense technology, interference RNA, and growth factors. The regulatory framework required for the approval of biotechnology-derived products (or biologics) is lengthy, rigorous and highly complicated. This certificate delves into the complex regulations governing the development, manufacturing and distribution of such products.

Through completion of the certificate, students understand the following:

- the pharmaceutical science behind the discovery of biotechnology products, including biologics, biosimilars and biopharmaceuticals;
- the requirements for sourcing and testing materials used in the production of biotechnology products;
- the technologies and unique considerations associated with the manufacturing and distribution of biotechnology products;
- the applicable regulations involved with biotechnology products; and
- the processes used to sterilize biotechnology products, including regulatory requirements for thermal, gaseous, radiation, filtration and aseptic processing.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall and Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5471	Biotechnology: Bioprocess Basics	3
QARA 5475		3
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	3
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	3
<b>Elective</b>		<b>3</b>
Select one from the following:		
QARA 5492	Production of Sterile Parenterals	
QARA 5493	Sterilization Processes	
QARA 5501	Development of Sterile Products	
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	
<b>Total Credit Hours</b>		<b>15</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/biopharmaceutical-manufacturing-and-ra>

#### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

#### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

#### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean



qara@temple.edu  
267-468-8560

## Graduate Certificate: Clinical Trial Management

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Clinical Trial Management.

### About the Certificate

The graduate certificate in Clinical Trial Management is specifically designed for pharmaceutical and healthcare professionals who actively contribute to the clinical trial process, including physicians, clinical research monitors, investigators and coordinators, and members of Institutional Review Boards (IRBs). Coursework provides the tools and information needed to understand the basis for new drug discovery, the design and implementation of the clinical protocol, its conduct and effective monitoring strategies, and the auditing of data to ensure the integrity of the trial.

Students sharpen their knowledge of clinical trials without committing to a master's degree. The certificate leads to understanding how clinical trials must be designed and overseen in the pharmaceutical industry, including writing protocols and consent forms, understanding the requirements of Good Clinical Practices, and managing budgets and data.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5536	Good Clinical Practices	3
QARA 5537	Clinical Trial Management	3
QARA 5612	Bioethics for Pharmaceutical Professionals	3
<b>Elective</b>		
Select one from the following:		3
QARA 5497	Statistics for Clinical Trials	
QARA 5538	Clinical Drug Safety and Pharmacovigilance	
QARA 5547	Project Management for Clinical Trials	
QARA 5578	Benefit Risk Management and Safety Signaling of Healthcare Products	
QARA 5618	Clinical Data Management (CDM)	
<b>Total Credit Hours</b>		<b>15</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/clinical-trial-management-certificate%C2%A0pre-masters>

#### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

#### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

#### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Graduate Certificate: Drug Development

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Drug Development.

### About the Certificate

Regulations governing the pharmaceutical industry at the state, federal and global levels continue to expand and change. Quality assurance principles are the core of pharmaceutical discovery, manufacturing, clinical trials and validation processes. Familiarity with the latest trends

and current practices in regulatory affairs is critical to any industry professional's success.

The graduate certificate in Drug Development is specifically designed for pharmaceutical and healthcare professionals who actively contribute to the drug development process or aspire to pursue a career in the pharmaceutical industry. Students explore regulatory affairs and quality assurance as a prospective career path without committing to a master's degree. The certificate provides the tools and information needed to understand the basis for new drug discovery; the Federal Food, Drug, and Cosmetic Act (FD&C Act); and good pharmaceutical practices as they apply to the clinical, laboratory or manufacturing components of the drug development process.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5477	Good Manufacturing Practices <sup>1</sup>	3
QARA 5592	Food and Drug Law	3
<b>Elective</b> <sup>2</sup>		<b>3</b>
<b>Total Credit Hours</b>		<b>12</b>

1

It is strongly recommended that students take QARA 5477. Depending on their career path in industry, however, students may request to instead take QARA 5476 Good Laboratory Practices, QARA 5479 Advanced Good Manufacturing Practices - Defining "c" or QARA 5536 Good Clinical Practices. Permission from the Advisor is required.

2

Students may select any elective course in the Regulatory Affairs and Quality Assurance (RAQA) MS (p. 754) program for the elective, which allows maximum flexibility to pursue a particular career objective. Those, however, who want to complete the four requirements for the master's degree in RAQA should take QARA 5494 Quality Audit or QARA 5495 Investigational New Drug/New Drug Application Submissions as their elective for the certificate.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/academics/certificate-programs-qara/drug-development>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Graduate Certificate: Food Regulatory Affairs and Quality Assurance

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Food Regulatory Affairs and Quality Assurance.

### About the Certificate

The graduate certificate in Food Regulatory Affairs and Quality Assurance is intended to enable Regulatory Affairs and Quality Assurance (RAQA) students to receive formal recognition for studying food regulation and quality practices, which expands their regulatory knowledge. The certificate is also designed for individuals working in Philadelphia's large food industry so they can earn credentials in this highly important and rapidly expanding field. As the name "Food and Drug Administration" (FDA) implies, numerous parallels exist between the regulations and quality practices of drug and food products. Since the 1990s, employees from Philadelphia's food industry have been engaged in the RAQA graduate program, either taking individual

courses or pursuing the MS degree. Then, in 2011, the Food Safety and Modernization Act (FSMA) encompassed some of the most sweeping reforms in food safety laws in more than 70 years, shifting the focus of food safety from responding to contamination to preventing it.

Through completion of the certificate, students become:

- knowledgeable and conversant in key regulatory practices that prepare them for supervisory and managerial positions in the food industry or better prepare them for positions in the pharmaceutical industry with food-related products;
- fluent in discussing the basics of food quality practices, including good manufacturing practices (GMPs) and preventive control and hazard/risk analysis;
- knowledgeable about the legal and regulatory requirements involved in a food company's processing activities;
- capable of identifying the key regulatory agencies—in addition to the FDA, the Environmental Protection Agency (EPA) and the United States Department of Agriculture (USDA)—involved in food quality assurance and regulation, being familiar with their roles, responsibilities, and missions; and
- fluent in knowing where to find the latest FDA regulatory changes in the food industry so they can respond quickly to new regulatory and quality trends and developments.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Job Prospects:** Those completing the certificate gain the knowledge and skills to prepare them to address the laws and regulations set forth in FSMA. Graduates are at an advantage when pursuing an FDA career in food inspection or employment with food manufacturers. They are also prepared to work with the medical foods of the RAQA industry, such as baby formula, dietary supplements, nutraceuticals, and vitamins.

**Non-Matriculated Student Policy:** The certificate program may be completed on a non-matriculated basis.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 9<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
QARA 5595	Food Law	3
QARA 5596	Food Labeling and Regulatory Affairs	3
QARA 5597	Food Good Manufacturing Processes	3
<b>Total Credit Hours</b>		<b>9</b>

1

Upon completion of the certificate, students who choose to pursue additional study in food issues are recommended to take QARA 5594 Regulation of Dietary Supplements and Functional Foods (3 s.h.).

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/food-ra-and-qa>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

#### Admissions:

Wendy Lebing, MALD, MS  
Assistant Dean  
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## Graduate Certificate: Generic Drugs

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Generic Drugs.

### About the Certificate

The graduate certificate in Generic Drugs studies the topics that are unique to generic drug manufacturers. Courses focus on the regulatory issues that are critical for generic industry professionals to understand if they are to ensure that their companies create safe and effective bioequivalent drugs. Coursework delves into the global business environment of generic therapeutic products and pertinent domestic and global regulations. Starting with an overview of the drug development process for innovator products, the required courses compare and explore the Abbreviated New Drug Application (ANDAs) used for generics. Elective courses enable students to explore various manufacturing and regulatory issues, including current trends in the

global marketplace regarding APIs and excipients. The certificate allows students to sharpen their knowledge of this industry niche without committing to a master's degree.

The Generic Drugs certificate provides the tools and information to understand how generic drugs are regulated locally, nationally and globally. Students become familiar with:

- domestic and global regulations for generic products,
- the highly competitive environment of generic products,
- manufacturing issues of global products, and
- current regulatory filing and quality assurance issues affecting generic products.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biology, Chemistry, Engineering, Pharmacy, Physics or related field.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5473	Generic Drug Regulation (ANDAs)	3
<b>Electives</b>		
Select two from the following:		6
PS 8004	Solid Dosage Forms - Small Molecules	
QARA 5458	Global Biopharmaceutical Industry	
QARA 5477	Good Manufacturing Practices	
QARA 5513	Active Pharmaceutical Ingredients (APIs)	
QARA 5543	Good Distribution Practices	
QARA 5546	Global Pharmaceutical Excipient Regulation	
QARA 5576	Global CMC Issues and Regulatory Dossier	
QARA 5650	Special Topics in Regulatory Affairs and Quality Assurance	

QARA 5655	Analytical Chemistry in Pharmaceutical Laboratories
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**Total Credit Hours**

**12**

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/generic-drugs>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
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267-468-8560

### Mailing Address for Application Materials:

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### Department Contacts:

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## Graduate Certificate: Global Pharmacovigilance/Benefit-Risk Management

SCHOOL OF PHARMACY

### About the Certificate

Pharmacovigilance focuses on the detection, assessment, understanding and prevention of adverse effects associated with the use of healthcare products, including biologics, consumer products, devices, drugs, human cell and tissue products, in vitro diagnostics, and vaccines. The healthcare industry is challenged with providing safety oversight throughout the product lifecycle, including continually reviewing safety profiles as well as managing and assessing benefits and risks that arise during and after product development. While a company's goal is to move products through all phases of development in a timely and cost-efficient manner, the obligation to protect public safety remains paramount.

The discipline of pharmacovigilance is constantly evolving in a dynamic regulatory, economic and scientific environment. The graduate certificate in Global Pharmacovigilance/Benefit-Risk Assessment provides a strong foundation in pharmacovigilance principles for both experienced professionals and those seeking entry into the career field from within and outside of regulated industry. Coursework explores pharmacovigilance in a global environment, combining key regulatory, scientific, demographic and analytical concepts that define the field. Upon

completion of the certificate, students can better appreciate the need for continuous learning in this complex discipline.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
QARA 5508	Good Pharmacovigilance Operations	3
QARA 5538 or QARA 5571	Clinical Drug Safety and Pharmacovigilance Post-Marketing Safety Surveillance	3
QARA 5573	Pharmacoepidemiology	3
QARA 5578	Benefit Risk Management and Safety Signaling of Healthcare Products	3
QARA 5579	Regulatory and Legal Basis of Pharmacovigilance	3

**Total Credit Hours** 15

1

For their first course, it is suggested that students take QARA 5538 Clinical Drug Safety and Pharmacovigilance or QARA 5571 Post-Marketing Safety Surveillance. Both courses provide an overview of pharmacovigilance practices, but with a slightly different focus. QARA 5538 focuses on preclinical and clinical applications, while QARA 5571 focuses primarily on pharmacovigilance practices after a product is created. Alternately, students may begin the program with QARA 5573 Pharmacoepidemiology. Finally, those with prior educational or professional experience in regulatory affairs, clinical research or clinical drug safety may start with QARA 5579 Regulatory and Legal Basis of Pharmacovigilance.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/global-pharmacovigilance-benefit-risk-management-certificate>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
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### Mailing Address for Application Materials:

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### Department Contacts:

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## Graduate Certificate: Medical Device

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Medical Device.

### About the Certificate

The U.S. Food and Drug Administration (FDA) regulation of medical devices has the same objective as its regulation of drugs: protecting public health by ensuring a balance of risk vs. benefit for marketed products. Some high-risk medical devices, such as sutures, contact lenses and antibiotic sensitivity disks, were regulated as drugs before legislation was passed in 1976 extending the FDA's regulatory authority over devices. Because medical devices are highly variable in complexity and technology, a more flexible approach to regulation has evolved to meet this variability than has evolved for drugs.

The graduate certificate in Medical Device focuses on the domestic and global regulations governing the medical device field. Many pharmaceutical companies have separate device divisions or entire subsidiaries that focus on marketing medical and diagnostic devices, such as diagnostic instruments and kits, surgical sponges, and drug delivery devices, which range from syringes to transdermal patches. Regulatory affairs professionals pursuing this certificate deepen their understanding of the device field by exploring the similarities and differences in pharmaceutical and device regulations. The certificate reviews key aspects of the medical device industry: regulation, compliance and submissions in the domestic and global realms. Instructors are experts from the medical device sector who conduct highly interactive classes with hands-on workshops, enabling students to apply their knowledge immediately to the workplace.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5496	Regulation of Medical Devices: Compliance	3
QARA 5502	Regulation of Medical Devices: Submissions	3
QARA 5505	Global Regulation of Medical Devices	3
QARA 5592	Food and Drug Law	3
<b>Elective</b>		
Select one from the following:		3
QARA 5474	Process Validation	
QARA 5494	Quality Audit	
QARA 5498	Computerized System Validation	
QARA 5499	Drug Dosage Forms	
QARA 5541	Pharmaceutical Packaging: Technology and Regulation	
QARA 5548	Risk Management of Pharmaceutical and Medical Devices	
<b>Total Credit Hours</b>		<b>15</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/medical-devices>

## Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
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## Mailing Address for Application Materials:

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## Department Contacts:

### Admissions:

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qara@temple.edu  
267-468-8560

## Graduate Certificate: Pharmaceutical Labeling, Advertising and Promotions

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Pharmaceutical Labeling, Advertising and Promotions.

## About the Certificate

The graduate certificate in Pharmaceutical Labeling, Advertising and Promotions is intended to produce well-qualified experts with knowledge of the U.S. and global regulations governing the labeling, advertising and promotions of pharmaceuticals and related products. Coursework addresses the complexity of the Prescribing Information (PI), showing how it must delineate every aspect of the product, from its dosage form to its unique storage requirements and dosage information. Topics include how the PI must be incorporated into print and internet advertising and promotions for products and also the requirements for television ads. Differences in the regulations in key world markets are also discussed.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis.

APPLY HERE to the post-baccalaureate certificate program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
QARA 5532	Global Labeling Regulation: Principles and Practices	3
QARA 5533	Requirements for Product Labeling and Advertising	3
QARA 5592	Food and Drug Law	3
QARA 5611	Regulation of Advertising and Promotions	3
<b>Total Credit Hours</b>		<b>12</b>

1

Graduate students who already earned their MS in Regulatory Affairs and Quality Assurance should enroll in the post-master's certificate in Pharmaceutical Labeling, Advertising and Promotions (p. 779).

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/labeling-advertising-and-promotions>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
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### Mailing Address for Application Materials:

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# Graduate Certificate: Pharmaceutical Manufacturing: Process Development and Analysis

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Pharmaceutical Manufacturing: Process Development and Analysis.

## About the Certificate

The graduate certificate in Pharmaceutical Manufacturing: Process Development and Analysis is designed to enhance students' understanding of the science and regulations involved in pharmaceutical manufacturing processes. Through coursework, students learn how to set standards for increasing product quality, improve plant efficiency, lower production costs, and meet current domestic and global compliance requirements. The curriculum also reflects the culture of meeting continuous manufacturing quality, such as the Food and Drug Administration's Quality Metric Guidance document and its focus on data integrity, change control, quality risk management, Installation Qualifications (IQ), Operational Qualifications (OQ), and Performance Qualifications (PQ).

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

*APPLY HERE to the post-baccalaureate certificate program.*

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Engineering, Pharmacy, Physics or related discipline. They must also have a basic knowledge of pharmaceutical manufacturing processes.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
QARA 5622	Unit Operations	3

QARA 5627	Statistical Design of Experiments (DOE)	3
QARA 5629	Process Monitoring	3
<b>Elective</b>		<b>3</b>
Select one from the following:		
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	
QARA 5548	Risk Management of Pharmaceutical and Medical Devices	
QARA 5625	Process Analytical Technology (PAT)	
<b>Total Credit Hours</b>		<b>12</b>

1

It is recommended that students take the core courses in the following order, if possible: QARA 5622 first, QARA 5629 second, and QARA 5627 third. The elective is taken last.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/pharmaceutical-manufacturing-process-development-and-analysis-certificate>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
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267-468-8560

### Mailing Address for Application Materials:

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Regulatory Affairs and Quality Assurance Graduate Program  
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### Department Contacts:

*Admissions:*  
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267-468-8560

## Graduate Certificate: Sterile Process Manufacturing

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Sterile Process Manufacturing.

### About the Certificate

The graduate certificate in Sterile Process Manufacturing is intended to enable Regulatory Affairs and Quality Assurance (RAQA) students to receive formal recognition for studying the techniques and applicable regulations used in the development and manufacture of sterile products.

Sterile products include a wide range of commonly used items, such as intradermal (ID), intramuscular (IM), intravenous (IV), and subcutaneous (SC), as well as vaccines and products administered directly into different parts of the body, such as arteries (intra-arterial), bones (intrasternal), heart (intracardiac), or the spinal canal (intrathecal). Sterile products must be manufactured using aseptic (i.e., free from contamination) methods wherein the drug substance, excipients, and vehicle (e.g., saline or water for injection) are combined in a container, such as a syringe. Generally, the final dosage form cannot be sterilized at the end of the manufacturing process since the drug substance would become degraded. Therefore, sterility must be ensured during the manufacturing process by utilizing sterile filtration, microbial controls, and facility design, all of which must follow regulatory guidelines.

Through completion of the certificate, students understand the following:

- routes and types of administration of sterile products;
- regulations, processes and unique considerations involved with sterile parenteral products;
- manufacturing and facility requirements for the design and production of sterile products;
- validation and compliance specifications for sterile products; and
- methods used for sterilization, including regulatory requirements for thermal, gaseous, radiation, filtration and aseptic processing.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

*APPLY HERE to the post-baccalaureate certificate program.*

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5492 or QARA 5493	Production of Sterile Parenterals Sterilization Processes	3
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	3



**Electives** 6

Select two from the following:

QARA 5492	Production of Sterile Parenterals <sup>1</sup>
QARA 5493	Sterilization Processes <sup>1</sup>
QARA 5501	Development of Sterile Products
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues

**Total Credit Hours** 12

1

Course may be selected as an elective only if not taken as a core course above.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/sterile-process-manufacturing>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
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### Mailing Address for Application Materials:

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## Graduate Certificate: Validation Sciences

SCHOOL OF PHARMACY

Learn more about the graduate certificate in Validation Sciences.

### About the Certificate

The graduate certificate in Validation Sciences provides students with a strong foundation in validation science principles, whether the student is an experienced professional or someone seeking entry into the career field. Validation is a critical and all-encompassing tool in the pharmaceutical, medical device, biotechnology and related regulated industries. At the heart of quality assurance practices, validation includes every test and scientific methodology used to demonstrate that facilities, utilities, equipment, processes, computers and products meet agreed-

upon standards. Validation relies on the measured precision of scientific methods.

Coursework explores validation sciences in a global environment, combining key regulatory, scientific and analytical concepts. Through completion of the certificate, students understand and can apply:

- the benefits, principles and concepts associated with validation science; and
- the domestic and international regulations that govern the discipline.

**Time Limit for Certificate Completion:** 4 years**Campus Location:** Health Sciences and Online

**Full-Time/Part-Time Status:** The certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

*APPLY HERE to the post-baccalaureate certificate program.*

**Coursework Required for Admission Consideration:** Students pursuing the certificate in Validation Sciences are expected to have knowledge of current Good Manufacturing Practice regulations. Students without such knowledge should consider taking QARA 5477 Good Manufacturing Practices (3 s.h.) before starting the program.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 15**Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5468	Validation of Facilities, Utilities and Equipment (FUE)	3
QARA 5474	Process Validation <sup>1</sup>	3
<b>Electives</b> 9		
Select three from the following:		
QARA 5451	Statistical Quality Control	
QARA 5478	High Purity Water Systems	
QARA 5492	Production of Sterile Parenterals	
QARA 5493	Sterilization Processes	
QARA 5498	Computerized System Validation	

QARA 5503	Design Controls for Medical Devices and Combination Products
QARA 5516	Cleaning Validation
QARA 5627	Statistical Design of Experiments (DOE)
QARA 5629	Process Monitoring
QARA 5650	Special Topics in Regulatory Affairs and Quality Assurance <sup>2</sup>
<b>Total Credit Hours</b>	<b>15</b>

1

Students are expected to take QARA 5474 as their first course. However, students with educational or professional experience in validation science may begin the certificate program with an elective, although all required courses must be completed to earn the certificate.

2

QARA 5650 should focus on current development and regulatory practices in validation science.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/pre-masters-certificates/validation-science>

### Department Information:

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### Department Contacts:

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## Post-Master's Certificate: Advanced Regulatory Affairs and Quality Assurance

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Advanced Regulatory Affairs and Quality Assurance is designed to allow individuals holding a master's degree in Regulatory Affairs and Quality Assurance (RAQA) to pursue advanced coursework from a broad array of topics and receive formal recognition

for their work. The certificate program is also open to those holding an advanced degree in the sciences who have worked extensively in the pharmaceutical industry and seek a cadre of advanced courses in RA or QA to be compliant with Food and Drug Administration regulations on training records.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants completing the program to earn the post-master's certificate must hold a master's degree in Regulatory Affairs and Quality Assurance from Temple University or a peer institution. An advanced degree in the sciences is also accepted.

Applicants who did not earn their master's degree from Temple University's School of Pharmacy must formally apply to the certificate program. They must provide proof of their advanced degree, including a transcript and documentation of the titles and descriptions of previous RA/QA courses taken. A summary of their industry experience in the form of a CV or resume is also required.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants completing the program to earn a graduate certificate must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12-15, depending on the institution from which and/or the subject in which the master's degree was earned<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
Select four or five from the following approved courses:		12-15
PS 5501	Development of Sterile Products	
PS 8005	Pharmaceutical Biotechnology	
PS 8111	Introduction to Toxicology	
PS 8403	Advanced Pharmacogenomics	
QARA 5000	Special Topics in Regulatory Affairs and Quality Assurance	

QARA 5401	Fundamentals of Pharmacology and Pharmacokinetics	QARA 5571	Post-Marketing Safety Surveillance
QARA 5408	Pharmacoeconomics	QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues
QARA 5451	Statistical Quality Control	QARA 5573	Pharmacoepidemiology
QARA 5458	Global Biopharmaceutical Industry	QARA 5574	Pharmaceutical Quality Management Systems
QARA 5469	Pharmaceutical Laboratory Quality Systems and Operations	QARA 5575	Regulatory Sciences: Managing the Guidelines to Quality
QARA 5471	Biotechnology: Bioprocess Basics	QARA 5576	Global CMC Issues and Regulatory Dossier
QARA 5472	Pharmaceutical Marketing	QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics
QARA 5473	Generic Drug Regulation (ANDAs)	QARA 5578	Benefit Risk Management and Safety Signaling of Healthcare Products
QARA 5474	Process Validation	QARA 5579	Regulatory and Legal Basis of Pharmacovigilance
QARA 5476	Good Laboratory Practices	QARA 5591	Global Regulatory Affairs
QARA 5477	Good Manufacturing Practices	QARA 5594	Regulation of Dietary Supplements and Functional Foods
QARA 5478	High Purity Water Systems	QARA 5595	Food Law
QARA 5479	Advanced Good Manufacturing Practices - Defining "c"	QARA 5596	Food Labeling and Regulatory Affairs
QARA 5491	Pre-Approval Inspections	QARA 5599	Clinical Aspects of Pharmaceutical Medicine
QARA 5492	Production of Sterile Parenterals	QARA 5601	Industry Interactions with FDA/Health Authorities
QARA 5493	Sterilization Processes	QARA 5602	
QARA 5494	Quality Audit	QARA 5605	Advanced Topics in Food and Drug Law
QARA 5495	Investigational New Drug/New Drug Application Submissions	QARA 5611	Regulation of Advertising and Promotions
QARA 5496	Regulation of Medical Devices: Compliance	QARA 5612	Bioethics for Pharmaceutical Professionals
QARA 5497	Statistics for Clinical Trials	QARA 5615	Project Management for Pharmaceutical Professionals
QARA 5498	Computerized System Validation	QARA 5618	Clinical Data Management (CDM)
QARA 5499	Drug Dosage Forms	QARA 5622	Unit Operations
QARA 5502	Regulation of Medical Devices: Submissions	QARA 5625	Process Analytical Technology (PAT)
QARA 5505	Global Regulation of Medical Devices	QARA 5627	Statistical Design of Experiments (DOE)
QARA 5506	Environmental Law and Regulation (EPA)	QARA 5629	Process Monitoring
QARA 5508	Good Pharmacovigilance Operations	QARA 5655	Analytical Chemistry in Pharmaceutical Laboratories
QARA 5511	Advanced Audit Workshop of Quality Systems	QARA 8002	Pharmaceutical Analysis
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	QARA 8003	Preformulation - Small Molecules
QARA 5513	Active Pharmaceutical Ingredients (APIs)	QARA 8004	Pharmaceutical Manufacturing II: Solid Dosage Forms
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	QARA 8006	Physical Pharmacy I
QARA 5516	Cleaning Validation	QARA 8007	Applied Biopharmaceutics
QARA 5532	Global Labeling Regulation: Principles and Practices		
QARA 5533	Requirements for Product Labeling and Advertising		
QARA 5534	Regulatory Aspects of Biomedical/Technical Communication		
QARA 5535	Advanced Topics in Labeling Development		
QARA 5536	Good Clinical Practices		
QARA 5537	Clinical Trial Management		
QARA 5538	Clinical Drug Safety and Pharmacovigilance		
QARA 5539	Global Clinical Drug Development		
QARA 5541	Pharmaceutical Packaging: Technology and Regulation		
QARA 5543	Good Distribution Practices		
QARA 5544	Regulatory Intelligence		
QARA 5545	Post Approval Changes (PAC)		
QARA 5546	Global Pharmaceutical Excipient Regulation		
QARA 5547	Project Management for Clinical Trials		
		<b>Total Credit Hours</b>	<b>12-15</b>
		1	

Students who earned their MS in Regulatory Affairs and Quality Assurance from Temple University's School of Pharmacy are permitted to select any four 3-credit courses not previously completed as part of their MS curriculum. Those who earned a master's degree in Regulatory Affairs and Quality Assurance from a peer institution, as well as those holding an advanced degree in the sciences, are required to take five 3-credit courses.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/advanced-regulatory-affairs-and-quality-assurance>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

#### Admissions:

Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Biologics and Biosimilars Manufacturing

SCHOOL OF PHARMACY

### About the Certificate

Given the rapidly expanded development of biopharmaceuticals in the past decade, an immediate need exists for professionals with knowledge of and credentials in key manufacturing quality issues governing biologics and biosimilar drugs. The post-master's certificate in Biologics and Biosimilars Manufacturing requires the completion of coursework focusing on how biologics and biosimilars are manufactured, looking specifically at regulatory compliance elements, fundamentals of Quality by Design (QbD) and Statistical Process Control (SPC). Chemistry, Manufacturing and Controls (CMC) strategies, including materials sourcing and testing requirements, are also studied. Discussions include the technologies used in manufacturing and the unique considerations that arise when dealing with such technologies as cell and gene therapies, therapeutic monoclonal antibodies, vaccines, cytokines, antisense technology, interference RNA and growth factors.

**Time Limit for Certificate Completion:** 4 years, with courses meeting for a minimum of 36 class contact hours over 10 or 12 consecutive weeks

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biology, Chemistry, Engineering, Pharmacy, Physics or related field.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PS 8005	Pharmaceutical Biotechnology	3
QARA 5471	Biotechnology: Bioprocess Basics <sup>1</sup>	3
QARA 5515	Biologics/Biosimilars: A Regulatory Overview <sup>1</sup>	3
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	3
<b>Elective</b>		
Select one from the following:		3
PS 5501	Development of Sterile Products	
QARA 5000	Special Topics in Regulatory Affairs and Quality Assurance <sup>2</sup>	
QARA 5451	Statistical Quality Control	
QARA 5468	Validation of Facilities, Utilities and Equipment (FUE)	
QARA 5474	Process Validation	
QARA 5479	Advanced Good Manufacturing Practices - Defining "c"	
QARA 5492	Production of Sterile Parenterals	
QARA 5493	Sterilization Processes	
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	
QARA 5516	Cleaning Validation	
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	
QARA 5625	Process Analytical Technology (PAT)	
QARA 5627	Statistical Design of Experiments (DOE)	
QARA 5629	Process Monitoring	
<b>Total Credit Hours</b>		<b>15</b>

1

With prior written approval of the RAQA Office, students with demonstrated experience in biotechnology or biologics/biosimilar regulatory aspects may substitute an elective for QARA 5471 or QARA 5515.

2

Before taking QARA 5000 Special Topics in Regulatory Affairs and Quality Assurance as an elective, students must receive prior written approval from the RAQA Office to ensure that the course content focuses specifically on biologics and biosimilars.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/biologics-and-biosimilars-manufacturing>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Biologics and Biosimilars: Regulatory Aspects

SCHOOL OF PHARMACY

### About the Certificate

Given the rapidly expanded development of biopharmaceuticals in the past decade, an immediate need exists for professionals with knowledge of and credentials in U.S. and global regulations governing biologics and biosimilar drugs. The post-master's certificate in Biologics and Biosimilars: Regulatory Aspects explores the regulatory, strategic, technical and scientific issues that are unique to biologics and biosimilar drug manufacturers.

Discussions include the clinical, manufacturing, regulatory and strategic issues that challenge the global commercialization pathways of biological products, as well as current technical and scientific issues involved in developing biological products in major regions of the

International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH). Questions such as how biologics and biosimilars differ from chemically synthesized drugs and the unique analytical methods used to characterize biologics, as opposed to small molecule testing, are covered. Topics include Quality by Design (QbD) principles relating to development, manufacturing and testing of biologics. Three required courses review the drug development process, biologic and biosimilar regulations, as well as global Chemistry, Manufacturing and Controls (CMC) issues for biologics. Depending on career focus, students may select electives in sterile products (such as vaccines), pharmacovigilance issues, clinical issues or regulatory eSubmissions.

The Biologics and Biosimilars: Regulatory Aspects certificate may be pursued on its own or as part of the Regulatory Affairs and Quality Assurance MS (p. 754), if not already earned.

**Time Limit for Certificate Completion:** 4 years, with courses meeting for a minimum of 36 class contact hours over 10 or 12 consecutive weeks

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biology, Chemistry, Engineering, Pharmacy, Physics or related field.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 15*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
QARA 5459	Drug Development	3
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	3
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	3
<b>Electives</b>		
Select two from the following:		6
QARA 5000	Special Topics in Regulatory Affairs and Quality Assurance <sup>2</sup>	
QARA 5492	Production of Sterile Parenterals	

QARA 5514	Regulatory eSubmissions
QARA 5538	Clinical Drug Safety and Pharmacovigilance <sup>3</sup>
QARA 5571	Post-Marketing Safety Surveillance <sup>3</sup>
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues
QARA 5650	Special Topics in Regulatory Affairs and Quality Assurance <sup>4</sup>
<hr/>	
<b>Total Credit Hours</b>	<b>15</b>

1

Students who previously completed any of these required core courses as part of the Regulatory Affairs and Quality Assurance MS (p. 754) should consult with the RAQA Office about substituting elective courses in their place.

2

Before taking QARA 5000 Special Topics in Regulatory Affairs and Quality Assurance as an elective, students must receive prior written approval from the RAQA Office to ensure that the course content focuses specifically on biopharmaceutical manufacturing.

3

Students may take QARA 5538 **or** QARA 5571 as an elective but not both.

4

Only the topic of "Current Trends in Clinical Trials" will be accepted for elective QARA 5650 Special Topics in Regulatory Affairs and Quality Assurance.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/biologics-and-biosimilars-regulatory-aspects%C2%A0>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

# Post-Master's Certificate: Biopharmaceutical Manufacturing and Regulatory Affairs

SCHOOL OF PHARMACY

## About the Certificate

The post-master's certificate in Biopharmaceutical Manufacturing and Regulatory Affairs is intended to enable Regulatory Affairs and Quality Assurance (RAQA) specialists to receive formal recognition for studying the highly specialized, rapidly growing field of pharmaceutical biotechnology, which includes the manufacturing techniques and applicable regulations used in the development and production of biotechnology products. The first biopharmaceutical product, namely, recombinant human insulin, was approved in 1982. Since then, products derived through biotechnology have provided advances in medicine that include therapeutic monoclonal antibodies, cancer vaccines, cytokines, antisense technology, interference RNA, and growth factors. The regulatory framework required for the approval of biotechnology-derived products (or biologics) is lengthy, rigorous and highly complicated. This certificate delves into the complex regulations governing the development, manufacturing and distribution of such products.

Through completion of the certificate, students understand the following:

- the pharmaceutical science behind the discovery of biotechnology products, including biologics, biosimilars and biopharmaceuticals;
- the requirements for sourcing and testing materials used in the production of biotechnology products;
- the technologies and unique considerations associated with the manufacturing and distribution of biotechnology products;
- the applicable regulations involved with biotechnology products; and
- the processes used to sterilize biotechnology products, including regulatory requirements for thermal, gaseous, radiation, filtration and aseptic processing.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5471	Biotechnology: Bioprocess Basics	3
QARA 5475		3
QARA 5515	Biologics/Biosimilars: A Regulatory Overview	3
QARA 5577	Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics	3
<b>Elective</b>		<b>3</b>
Select one from the following:		
QARA 5492	Production of Sterile Parenterals	
QARA 5493	Sterilization Processes	
QARA 5501	Development of Sterile Products	
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	
<b>Total Credit Hours</b>		<b>15</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/academics/certificate-programs-regulatory-affairs-quality-assurance/biopharmaceutical-manufacturing-and-ra-biotechnology>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

# Post-Master's Certificate: Clinical Trial Management

SCHOOL OF PHARMACY

Learn more about the post-master's certificate in Clinical Trial Management.

## About the Certificate

The post-master's certificate in Clinical Trial Management is designed for those who hold an MS in Regulatory Affairs and Quality Assurance and want to keep current with industry issues and meet regulatory requirements for training. The certificate program is also open to professionals with other master's or doctoral degrees.

The Clinical Trial Management certificate is specifically designed for pharmaceutical and healthcare professionals who actively contribute to the clinical trial process, including physicians, clinical research monitors, investigators and coordinators, and members of Institutional Review Boards (IRBs). Coursework provides the tools and information needed to understand the basis for new drug discovery, the design and implementation of the clinical protocol, its conduct and effective monitoring strategies, and the auditing of data to ensure the integrity of the trial. The certificate leads to understanding how clinical trials must be designed and overseen in the pharmaceutical industry, including writing protocols and consent forms, understanding the requirements of Good Clinical Practices, and managing budgets and data.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field, including but not limited to an MS in Regulatory Affairs and Quality Assurance. Graduates of Temple University's RAQA program take certificate coursework to keep current with industry issues and meet regulatory requirements for training. Applicants with an advanced science degree from an accredited institution of higher learning other than Temple University must have worked in the pharmaceutical industry for a minimum of three years.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific

major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12 for graduates of the Temple University Regulatory Affairs and Quality Assurance (RAQA) MS; 15 for students who completed their master's degree at an institution other than Temple University

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5536	Good Clinical Practices	3
QARA 5537	Clinical Trial Management	3
QARA 5612	Bioethics for Pharmaceutical Professionals	3
<b>Elective</b>		
Select one from the following: <sup>2</sup>		3
QARA 5401	Fundamentals of Pharmacology and Pharmacokinetics	
QARA 5494	Quality Audit	
QARA 5497	Statistics for Clinical Trials	
QARA 5538	Clinical Drug Safety and Pharmacovigilance	
QARA 5539	Global Clinical Drug Development	
QARA 5547	Project Management for Clinical Trials	
QARA 5571	Post-Marketing Safety Surveillance	
QARA 5573	Pharmacoepidemiology	
QARA 5578	Benefit Risk Management and Safety Signaling of Healthcare Products	
QARA 5618	Clinical Data Management (CDM)	
<b>Total Credit Hours</b>		<b>15</b>

1

Graduates of Temple University's RAQA MS program take four courses to complete 12 credits, provided none of the courses were completed previously as part of their RAQA master's degree. Students who earned a non-Temple master's degree must complete all four core courses and one elective for a total of 15 credits.

2

Students holding a Temple RAQA MS select from the list of electives to complete 12 credits for the post-master's certificate only if they previously completed one or more core courses in earning their master's degree. All students who earned a non-Temple master's degree must select one elective to complete a total of 15 credits.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/clinical-trial-management>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175

Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Food Regulatory Affairs and Quality Assurance

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Food Regulatory Affairs and Quality Assurance enables Regulatory Affairs and Quality Assurance (RAQA) specialists to receive formal recognition for studying food regulation and quality practices, which expands their regulatory knowledge. The certificate is also designed for individuals working in Philadelphia's large food industry so they can earn credentials in this highly important and rapidly expanding field. As the name "Food and Drug Administration" (FDA) implies, numerous parallels exist between the regulations and quality practices of drug and food products. Since the 1990s, employees from Philadelphia's food industry have been engaged in the RAQA graduate program, either taking individual courses or pursuing the MS degree. Then, in 2011, the Food Safety and Modernization Act (FSMA) encompassed some of the most sweeping reforms in food safety laws in more than 70 years, shifting the focus of food safety from responding to contamination to preventing it.

Through completion of the certificate, students become:

- knowledgeable and conversant in key regulatory practices that prepare them for supervisory and managerial positions in the food industry or better prepare them for positions in the pharmaceutical industry with food-related products;
- fluent in discussing the basics of food quality practices, including good manufacturing practices (GMPs) and preventive control and hazard/risk analysis;
- knowledgeable about the legal and regulatory requirements involved in a food company's processing activities;
- capable of identifying the key regulatory agencies—in addition to the FDA, the Environmental Protection Agency (EPA) and the United States Department of Agriculture (USDA)—involved in food quality assurance and regulation, being familiar with their roles, responsibilities, and missions; and



- fluent in knowing where to find the latest FDA regulatory changes in the food industry so they can respond quickly to new regulatory and quality trends and developments.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Job Prospects:** Those completing the certificate gain the knowledge and skills to prepare them to address the laws and regulations set forth in FSMA. Graduates are at an advantage when pursuing an FDA career in food inspection or employment with food manufacturers. They are also prepared to work with the medical foods of the RAQA industry, such as baby formula, dietary supplements, nutraceuticals, and vitamins.

**Non-Matriculated Student Policy:** The certificate program may be completed on a non-matriculated basis.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 9<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
QARA 5595	Food Law	3
QARA 5596	Food Labeling and Regulatory Affairs	3
QARA 5597	Food Good Manufacturing Processes	3
<b>Total Credit Hours</b>		<b>9</b>

1

Upon completion of the certificate, students who choose to pursue additional study in food issues are recommended to take QARA 5594 Regulation of Dietary Supplements and Functional Foods (3 s.h.).

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/food-ra-and-qa>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
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267-468-8560

### Mailing Address for Application Materials:

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Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*

Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Generic Drugs

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Generic Drugs studies the topics that are unique to generic drug manufacturers. Courses focus on the regulatory issues that are critical for generic industry professionals to understand if they are to ensure that their companies create safe and effective bioequivalent drugs. Coursework delves into the global business environment of generic therapeutic products and pertinent domestic and global regulations. Starting with an overview of the drug development process for innovator products, the required courses compare and explore the Abbreviated New Drug Application (ANDAs) used for generics. Elective courses enable students to explore various manufacturing and regulatory issues, including current trends in the global marketplace regarding APIs and excipients. The certificate allows students to sharpen their knowledge of this industry niche.

The Generic Drugs certificate provides the tools and information to understand how generic drugs are regulated locally, nationally and globally. Students become familiar with:

- domestic and global regulations for generic products,
- the highly competitive environment of generic products,
- manufacturing issues of global products, and
- current regulatory filing and quality assurance issues affecting generic products.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

*APPLY HERE* to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biology, Chemistry, Engineering, Pharmacy, Physics or related field.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5459	Drug Development	3
QARA 5473	Generic Drug Regulation (ANDAs)	3
<b>Electives</b>		
Select two from the following:		6
PS 8004	Solid Dosage Forms - Small Molecules	
QARA 5458	Global Biopharmaceutical Industry	
QARA 5477	Good Manufacturing Practices	
QARA 5513	Active Pharmaceutical Ingredients (APIs)	
QARA 5543	Good Distribution Practices	
QARA 5546	Global Pharmaceutical Excipient Regulation	
QARA 5576	Global CMC Issues and Regulatory Dossier	
QARA 5650	Special Topics in Regulatory Affairs and Quality Assurance	
QARA 5655	Analytical Chemistry in Pharmaceutical Laboratories	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/generic-drugs-certificate>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program

425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Global Pharmacovigilance/Benefit-Risk Management

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Global Pharmacovigilance/Benefit-Risk Assessment is designed for those who hold an MS in Regulatory Affairs and Quality Assurance and want to keep current with industry issues and meet regulatory requirements for training. The certificate program is also open to professionals with other master's or doctoral degrees.

Pharmacovigilance is constantly evolving in a dynamic regulatory, economic and scientific environment. The post-master's certificate in Global Pharmacovigilance/Benefit-Risk Assessment provides a solid scientific and regulatory foundation in the key disciplines necessary for a successful career in the field of pharmacovigilance. It focuses on establishing a platform for continuous learning in pharmacovigilance rather than on an unrealistic goal of seeking total subject mastery. Importantly, it focuses on pharmacovigilance in a global environment.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field, including but not limited to an MS in Regulatory Affairs and Quality Assurance. Graduates of Temple University's RAQA program take certificate coursework to keep current with industry issues and meet regulatory requirements for training. Applicants with an advanced science degree from an accredited institution of higher learning other than Temple University must have worked in the pharmaceutical industry for a minimum of three years.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
QARA 5508	Good Pharmacovigilance Operations	3
QARA 5538	Clinical Drug Safety and Pharmacovigilance	3
or QARA 5571	Post-Marketing Safety Surveillance	
QARA 5573	Pharmacoepidemiology	3
QARA 5578	Benefit Risk Management and Safety Signaling of Healthcare Products	3
QARA 5579	Regulatory and Legal Basis of Pharmacovigilance	3
<b>Total Credit Hours</b>		<b>15</b>

1

Students select alternate coursework to complete the post-master's certificate from the approved QARA courses identified in the grid below if they:

- hold an MS in Regulatory Affairs and Quality Assurance, and
- completed one or more of the courses required for the post-master's certificate in previously fulfilling degree requirements for their master's degree.

## Approved QARA Courses for Substitution of Required Coursework Previously Completed

Code	Title	Credit Hours
QARA 5539	Global Clinical Drug Development	3
QARA 5547	Project Management for Clinical Trials	3
QARA 5548	Risk Management of Pharmaceutical and Medical Devices	3
QARA 5612	Bioethics for Pharmaceutical Professionals	3

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/global-pharmacovigilance-benefit-risk-assessment>

## Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

## Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

## Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Medical Device

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Medical Device is designed for those who hold an MS in Regulatory Affairs and Quality Assurance and want to keep current with industry issues and meet regulatory requirements for training. The certificate program is also open to professionals with other master's or doctoral degrees.

The U.S. Food and Drug Administration (FDA) regulation of medical devices has the same objective as its regulation of drugs: protecting public health by ensuring a balance of risk vs. benefit for marketed products. Some high-risk medical devices, such as sutures, contact lenses and antibiotic sensitivity disks, were regulated as drugs before legislation was passed in 1976 extending the FDA's regulatory authority over devices. Because medical devices are highly variable in complexity and technology, a more flexible approach to regulation has evolved to meet this variability than has evolved for drugs.

Coursework for the Medical Device post-master's certificate focuses on the domestic and global regulations governing the medical device field. Many pharmaceutical companies have separate device divisions or entire subsidiaries that focus on marketing medical and diagnostic devices, such as diagnostic instruments and kits, surgical sponges, and drug delivery devices, which range from syringes to transdermal patches. Regulatory affairs professionals pursuing this certificate deepen their understanding of the device field by exploring the similarities and differences in pharmaceutical and device regulations. The certificate reviews key aspects of the medical device industry: regulation, compliance and submissions in the domestic and global realms. Instructors are experts from the medical device sector who conduct highly interactive classes with hands-on workshops, enabling students to apply their knowledge immediately to the workplace.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field, including but not limited to an MS in Regulatory Affairs and Quality Assurance. Graduates of Temple University's RAQA program take certificate coursework to keep current with industry issues and meet regulatory requirements for training. Applicants with an advanced science degree from an accredited institution of higher learning other than Temple University must have worked in the pharmaceutical industry for a minimum of three years.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 15

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5496	Regulation of Medical Devices: Compliance	3
QARA 5502	Regulation of Medical Devices: Submissions	3
QARA 5505	Global Regulation of Medical Devices	3
QARA 5592	Food and Drug Law <sup>1</sup>	3
<b>Elective</b>		
Select one from the following:		3
QARA 5474	Process Validation	
QARA 5494	Quality Audit	
QARA 5498	Computerized System Validation	
QARA 5503	Design Controls for Medical Devices and Combination Products	
QARA 5511	Advanced Audit Workshop of Quality Systems	
QARA 5541	Pharmaceutical Packaging: Technology and Regulation	
QARA 5548	Risk Management of Pharmaceutical and Medical Devices	
<b>Total Credit Hours</b>		<b>15</b>

1

Graduates of Temple's MS in Regulatory Affairs and Quality Assurance program will have completed QARA 5592 as part of their master's degree. Those credits are brought forward to count for the Medical Device post-master's certificate. These students are then required to take QARA 5496 Regulation of Medical Devices: Compliance, QARA 5502 Regulation of Medical Devices: Submissions, QARA 5505 Global Regulation of Medical Devices, and one elective to complete the post-master's certificate in Medical Device. Any student who previously completed QARA 5496, QARA 5502 and/or QARA 5505 as part of their MS degree program must select an elective to replace any previously completed course(s) in fulfilling the required 15 credits for the post-master's certificate.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/medical-devices>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Pharmaceutical Labeling, Advertising and Promotions

SCHOOL OF PHARMACY

Learn more about the post-master's certificate in Pharmaceutical Labeling, Advertising and Promotions.

### About the Certificate

The post-master's certificate in Pharmaceutical Labeling, Advertising and Promotions is intended to produce well-qualified experts with knowledge of the U.S. and global regulations governing the labeling, advertising and promotions of pharmaceuticals and related products. Coursework addresses the complexity of the Prescribing Information (PI), showing how it must delineate every aspect of the product, from its dosage form to

its unique storage requirements and dosage information. Topics include how the PI must be incorporated into print and internet advertising and promotions for products and also the requirements for television ads. Differences in the regulations in key world markets are also discussed.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** The certificate program cannot be taken on a non-matriculated basis.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in Regulatory Affairs and Quality Assurance.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

**Other:** Applicants who did not earn their master's degree from Temple University's School of Pharmacy must have sufficient industry experience and familiarity with the basic tenets of regulatory affairs and quality assurance to pursue the post-master's certificate. As part of the application, these applicants must include:

- a letter of request to the Assistant Dean of Regulatory Affairs and Quality Assurance indicating the courses to be pursued and citing the applicant's industry experience;
- a copy of their resume; and
- a photocopy of their final transcript from the institution where the master's or doctoral degree was earned.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
QARA 5532	Global Labeling Regulation: Principles and Practices	3
QARA 5533	Requirements for Product Labeling and Advertising	3
QARA 5592	Food and Drug Law	3
QARA 5611	Regulation of Advertising and Promotions	3
<b>Total Credit Hours</b>		<b>12</b>

1

Post-master's students who have already completed one or more of the required certificate courses as part of the MS in Regulatory Affairs and Quality Assurance may, with prior written approval of the RAQA Office, complete one or more of the following electives: QARA 5507 Regulation of Non-Prescription Healthcare Products, QARA 5535 Advanced Topics in Labeling Development, QARA 5544 Regulatory Intelligence, QARA 5605 Advanced Topics in Food and Drug Law, and/or, when the special topic relates to issues of labeling, advertising, and promotions, QARA 5650 Special Topics in Regulatory Affairs and Quality Assurance.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/pharmaceutical-labeling-advertising-and-promotions>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Pharmaceutical Manufacturing: Process Development and Analysis

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Pharmaceutical Manufacturing: Process Development and Analysis is designed to enhance students' understanding of the science and regulations involved in pharmaceutical manufacturing processes. Through coursework, students learn how to set standards for increasing product quality, improve plant efficiency, lower production costs, and meet current domestic and global compliance requirements. The curriculum also reflects the culture of meeting continuous manufacturing quality, such as the Food and Drug Administration's Quality Metric Guidance document and its focus on

data integrity, change control, quality risk management, Installation Qualifications (IQ), Operational Qualifications (OQ), and Performance Qualifications (PQ).

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

Fall and Spring admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

APPLY HERE to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Engineering, Pharmacy, Physics or related discipline. They must also have a basic knowledge of pharmaceutical manufacturing processes.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b> <sup>1</sup>		
QARA 5622	Unit Operations	3
QARA 5627	Statistical Design of Experiments (DOE)	3
QARA 5629	Process Monitoring	3
<b>Elective</b>		<b>3</b>
Select one from the following:		
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	
QARA 5548	Risk Management of Pharmaceutical and Medical Devices	
QARA 5625	Process Analytical Technology (PAT)	
<b>Total Credit Hours</b>		<b>12</b>

<sup>1</sup>

It is recommended that students take the core courses in the following order, if possible: QARA 5622 first, QARA 5629 second, and QARA 5627 third. The elective is taken last.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/pharmaceutical-manufacturing-process-development-and-analysis>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Sterile Process Manufacturing

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Sterile Process Manufacturing is intended to enable Regulatory Affairs and Quality Assurance (RAQA) students to receive formal recognition for studying the techniques and applicable regulations used in the development and manufacture of sterile products. Sterile products include a wide range of commonly used items, such as intradermal (ID), intramuscular (IM), intravenous (IV), and subcutaneous (SC), as well as vaccines and products administered directly into different parts of the body, such as arteries (intra-arterial), bones (intrasternal), heart (intracardiac), or the spinal canal (intrathecal). Sterile products must be manufactured using aseptic (i.e., free from contamination) methods wherein the drug substance, excipients, and vehicle (e.g., saline or water for injection) are combined in a container, such as a syringe. Generally, the final dosage form cannot be sterilized at the end of the manufacturing process since the drug substance would become degraded. Therefore, sterility must be ensured during the manufacturing process by utilizing sterile filtration, microbial controls, and facility design, all of which must follow regulatory guidelines.

Through completion of the certificate, students understand the following:

- routes and types of administration of sterile products;
- regulations, processes, and unique considerations involved with sterile parenteral products;
- manufacturing and facility requirements for the design and production of sterile products;
- validation and compliance specifications for sterile products; and

- methods used for sterilization, including regulatory requirements for thermal, gaseous, radiation, filtration and aseptic processing.

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Online and Fort Washington

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

*APPLY HERE* to the post-master's certificate program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a BS degree in Biochemistry, Biology, Chemistry, Physics or a health-related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5492	Production of Sterile Parenterals	3
	or QARA 5493 Sterilization Processes	
QARA 5512	Microbiological Concepts in Pharmaceutical Manufacturing	3
<b>Electives</b>		<b>6</b>
Select two from the following:		
QARA 5492	Production of Sterile Parenterals <sup>1</sup>	
QARA 5493	Sterilization Processes <sup>1</sup>	
QARA 5501	Development of Sterile Products	
QARA 5572	Vaccines: Regulatory Affairs and Quality Assurance Issues	
<b>Total Credit Hours</b>		<b>12</b>

1

Course may be selected as an elective only if not taken as a core course above.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/sterile-process-manufacturing>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

Temple University  
Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560

## Post-Master's Certificate: Validation Sciences

SCHOOL OF PHARMACY

### About the Certificate

The post-master's certificate in Validation Sciences provides students with a strong foundation in validation science principles, whether the student is an experienced professional or someone seeking entry into the career field. Validation is a critical and all-encompassing tool in the pharmaceutical, medical device, biotechnology and related regulated industries. At the heart of quality assurance practices, validation includes every test and scientific methodology used to demonstrate that facilities, utilities, equipment, processes, computers and products meet agreed-upon standards. Validation relies on the measured precision of scientific methods.

Coursework explores validation sciences in a global environment, combining key regulatory, scientific and analytical concepts. Through completion of the certificate, students understand and can apply:

- the benefits, principles and concepts associated with validation science; and
- the domestic and international regulations that govern the discipline.

**Time Limit for Certificate Completion:** 4 years

**Campus Location:** Health Sciences and Online

**Full-Time/Part-Time Status:** The post-master's certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate

program. Please contact the School of Pharmacy's program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Interested students should contact the School of Pharmacy for permission to enroll in coursework.

*APPLY HERE* to the post-master's certificate program.

**Coursework Required for Admission Consideration:** Students pursuing the certificate in Validation Sciences are expected to have knowledge of current Good Manufacturing Practice regulations. Students without such knowledge should consider taking QARA 5477 Good Manufacturing Practices (3 s.h.) before starting the program.

**Master's Degree in Discipline/Related Discipline:** Applicants must hold a master's degree in a Pharmacy-related field.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a bachelor's degree from an accredited institution. While no specific major is required, most applicants should have a background in biological sciences, engineering, healthcare, natural sciences or related discipline.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 15*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
QARA 5468	Validation of Facilities, Utilities and Equipment (FUE)	3
QARA 5474	Process Validation <sup>1</sup>	3
<b>Electives</b>		<b>9</b>
Select three from the following:		
QARA 5451	Statistical Quality Control	
QARA 5478	High Purity Water Systems	
QARA 5492	Production of Sterile Parenterals	
QARA 5493	Sterilization Processes	
QARA 5498	Computerized System Validation	
QARA 5503	Design Controls for Medical Devices and Combination Products	
QARA 5516	Cleaning Validation	
QARA 5627	Statistical Design of Experiments (DOE)	
QARA 5629	Process Monitoring	
QARA 5650	Special Topics in Regulatory Affairs and Quality Assurance <sup>2</sup>	
<b>Total Credit Hours</b>		<b>15</b>

1

Students are expected to take QARA 5474 as their first course. However, students with educational or professional experience in validation science may begin the certificate program with an elective, although all required courses must be completed to earn the certificate.

2

QARA 5650 should focus on current development and regulatory practices in validation science.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://pharmacy.temple.edu/raqa/certificate-programs/post-masters-certificates/validation-science>

### Department Information:

Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728  
qara@temple.edu  
267-468-8560

### Mailing Address for Application Materials:

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Regulatory Affairs and Quality Assurance Graduate Program  
425 Commerce Drive, Suite 175  
Fort Washington, PA 19034-2728

### Department Contacts:

*Admissions:*  
Wendy Lebing, MALD, MS  
Assistant Dean  
qara@temple.edu  
267-468-8560



## School of Podiatric Medicine

Temple University School of Podiatric Medicine (TUSPM) opened in September 1963 as the Pennsylvania College of Podiatric Medicine (PCPM). In response to the 1960 closing of the Temple University School of Chiropractic, the original podiatric medical school, several faculty sought and obtained a charter from the Commonwealth of Pennsylvania to open a new school of podiatry. In July 1998, PCPM officially merged with Temple University. As a valued asset within the Temple University Health System, TUSPM continues to strengthen its presence within the Philadelphia community.

TUSPM is accredited by the Council on Podiatric Medical Education (CPME), holding the status of "accreditation" since 1967. Accreditation is an indication of public approbation, attesting to the quality of the podiatric medical education program and the institution's continued commitment to it. CPME is recognized by both the U.S. Department of Education and the Council for Higher Education Accreditation as the professional institutional accrediting agency for podiatric medical education. For more information, contact CPME at 9312 Old Georgetown Road, Bethesda, MD 20814 or at 301-571-9200.

The school's current campus opened in 1973. It was the first facility ever developed specifically for podiatric use. In addition to classrooms and laboratories, the complex includes both a medical clinic called the Foot and Ankle Institute and student housing. TUSPM is also home to The Shoe Museum, which was founded in 1976 to coincide with the nation's bicentennial as an added attraction for visitors to nearby Independence National Historical Park and the Liberty Bell. Its original international shoe collection was on long-term loan from the Dr. H. Augustus Wilson (1853-1919) Shoe Collection of The Mütter Museum at The College of Physicians of Philadelphia. Dr. Wilson was a noted Philadelphia orthopedist and world traveler who collected footwear from over 30 countries. Today, exhibits range from "The Anatomy and Physiology of Shoes" and "Mummer Shoes" to "Shoes in Space" and many more.

### Professional Program

- Podiatric Medicine DPM (p. 784)

## Podiatric Medicine DPM

SCHOOL OF PODIATRIC MEDICINE

Learn more about the Doctor of Podiatric Medicine.

### About the Program

Temple University School of Podiatric Medicine (TUSPM) offers coursework and clinical programs leading to the Doctor of Podiatric Medicine degree in four years. The DPM curriculum fully prepares students for post-graduate residency training.

**Time Limit for Degree Completion:** 6 years

**Campus Location:** Center City

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** In collaboration with the College of Public Health at Temple University, TUSPM offers a joint program that leads to the Master of Public Health and Doctor of Podiatric Medicine degrees. Earned full time in the midst of podiatric studies, the MPH helps students understand the social and environmental factors that influence healthcare

and patient experiences. These affiliated degree programs allow students to earn two advanced degrees in five years.

**Job Prospects:** Graduates of the program have excellent prospects at employment in the podiatric medicine field.

**Licensure/Certification:** Podiatric physicians are licensed in all 50 states, Washington, D.C., and Puerto Rico to treat the foot, ankle and related structures of the leg by medical, surgical or other means.

Students enrolled in any of the nine colleges of podiatric medicine are required to pass Parts I and II of the American Podiatric Medical Licensing Examination (APMLE) before beginning residency training. Part I covers basic science areas and is generally taken at the conclusion of the second year. Part II has two components: (a) a written exam that covers clinical areas such as Anesthesia and Surgery; Community Health, Jurisprudence and Research; Medicine; Orthopedics, Biomechanics and Sports Medicine; and Radiology; and (b) the Clinical Skills Patient Encounter (CSPE) portion that assesses proficiency in podiatric clinical tasks. Part III of the APMLE is taken during residency. The APMLE is overseen by the National Board of Podiatric Medical Examiners (NBPME). To learn more about the exam, visit <https://www.apmle.com/>.

State licensing requirements generally include graduation from an accredited school or college of podiatric medicine, passage of the National Board exams, and postgraduate training. Podiatric physicians may also become certified in one or both specialty areas: (a) primary care and orthopedics, and/or (b) surgery. National podiatric specialty boards grant certification to qualified podiatrists who have completed the specified educational requirements and who successfully complete written and oral examinations. For more information, see <https://aacpm.org/becoming-a-podiatric-physician/>.

**Non-Matriculated Student Policy:** Coursework may not be taken on a non-matriculated basis.

**Financing Opportunities:** Partial scholarships, student loans and work study funds are available.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall Admission Only:*

- April 1 - Priority Deadline for First-Year and International Applicants
- May 1 - Deadline for Transfer and Advanced Standing Applicants
- June 30 - Rolling Deadline for First-Year and International Applicants

Applications are processed as they are received throughout the year. Early application is encouraged.

APPLY ONLINE to this professional program.

Applicants for the Podiatric Medicine DPM must utilize the American Association of Colleges of Podiatric Medicine Application Service (AACPMAS), which is a centralized application service for all nine U.S. schools and colleges of podiatric medicine. The AACPMAS application must be completed at <https://aacpmas.liaisoncas.com/>.

**Letters of Reference:**

*Number Required:* 1-3

*From Whom:* For first-year applicants, letters of academic evaluation are required from an advisor and premedical advisory committee. Alternately, two letters are needed from science faculty and a letter from a podiatric physician. For transfer applicants, a letter of good standing is required from the dean of the applicant's current medical college. TUSPM participates in Interfolio and VirtualEvals.

**Degree Required for Admission Consideration:** Most incoming students have at least a bachelor's degree. The minimum requirement is 90 credits of undergraduate education completed at an accredited college or university, including these prerequisite courses:

- Biology or Zoology: 8 credits, including laboratory. Additional courses in Anatomy, Cell Biology, Embryology, Evolution, Genetics, Histology, Microbiology and Physiology are recommended but not required.
- General/Inorganic Chemistry: 8 credits, including laboratory
- Organic Chemistry: 8 credits, including laboratory. An additional course in Biochemistry is recommended but not required.
- Physics: 8 credits, including laboratory
- English: 6 credits
- An additional 52 credits

#### Standardized Test Scores:

MCAT or DAT: A minimum score is not fixed as candidates are evaluated on their entire academic portfolio, but the reported test score must be respectable. The test must have been taken no more than three years prior to the beginning of the application cycle.

**Interview:** A personal interview is required for all students under consideration by the Admissions Committee. Applicants take part in an interview day that consists of a tour of the TUSPM campus, lunch with current students, and interviews conducted by faculty members and admissions personnel.

**Transfer Credit:** Students transferring from other podiatric medical schools should expect to lose a year because of differences in curriculum. Podiatric-specific courses at TUSPM begin with the first-year curriculum.

## Program Requirements

### General Program Requirements:

*Number of Credits Required:* 196.15

*Required Courses:*

Code	Title	Credit Hours
<b>Year 1</b>		
PBMS P100	Histology	6.25
PBMS P102	General Anatomy	7
PBMS P103	Lower Extremity Anatomy	7.7
PBMS P104	Neurophysiology	2.5
PBMS P105	Neuroanatomy	2
PBMS P109	Biomechanics	2
PBMS P110	Biochemistry	6
PBMS P111	Physiology	5
PBMS P120	Microbiology	6.8
PDMD P130	Fundmntl of Podiatric Pract I	3.5
PDOR P142	Physical Medicine and Rehabilitation	2

### Year 2

PBMS P210	Pharmacology	5.25
PBMS P221	Pathology	9
PBMS P222	Pathophysiology	3
PDMD P200	Fundmntl of Podiatric Pract II	2.7
PDMD P215	Internal Medicine	3
PDMD P230	Fundamentals of Dermatology	2.2
PDMD P236	Foot and Ankle Radiology	2.6
PDMD P237	Vascular Disease	2
PDMD P239	Infectious Disease	1
PDMD P336	Neurology	1.6
PDOR P240	Pathomechanics	2
PDOR P241	Casting	1
PDOR P243	Clinic Foot Orthopedics	1.8
PDOR P248	Sports Medicine	2
PDSR P250	Principles of Podiatric Surgery I	2.8
PDSR P252	Principles of Podiatric Surgery II	2.5
PDSR P253	O R Protocol	1
PDSR P257	Podiatric Surgical Skills	2.4

### Year 3

PCED P381	Intro Clerkship Clinical Pod I	13.5
PCED P384	Clerkship Clinical Podiatry I	4.5
PCED P385	Clerkship Clinical Podiatry II	4.5
PCED P386	Clerkship Clinical Podiatry III	4.5
PCHA P360	Community Health	2
PCHA P361	Law & Podiatric Medicine	1.8
PCHA P362	Professional Administration and Development	2
PDOR P340	General Orthopedics	2
PDOR P342	Pediatric Foot Orthopedics	1.8
PDOR P346	Traumatology	1.75
PDSR P352	Princ First Ray Surgery	2.6
PDSR P353	Reconstruct Surgery Foot & Leg	2.6
Select one from the following:		4.5

PCED P387 Medical Elective

PDMD P334 Clerkship Internal Medicine

Select one from the following: 4.5

PDMD P331 Clerkship Clinical Neurology

PDMD P332 Clerkship Periph Vascular Dis

PDMD P334 Clerkship Internal Medicine (may be taken twice for credit)

PDMD P338 Clerkship Infectious Disease

PDOR P341 Clrkshp Gen Orthopedics

### Year 4

PCED P431	Clerkship Clinical Podiatry IV	4.5
PCED P432	Clerkship Clinical Podiatry V	4.5
PCED P440	Community Clerkship	4.5
PCED P441	External Podiatric Clerkship I	4.5
PCED P442	External Podiatric Clerkship II	4.5
PCED P443	External Podiatric Clerkship III	4.5
PCED P444	External Podiatric Clerkship IV	4.5
PCED P446	External Podiatric Clerkship V	4.5
Select one from the following:		4.5

PCED P443 External Podiatric Clerkship III

PCED P447	External Podiatric Clerkship VI	
Select one from the following:		4.5
PCED P410	Clerkship in General Orthopedics (cannot be taken in addition to PDOR P341)	
PDMD P421	Clerkship Clinical Neurology (cannot be taken in addition to PDMD P331)	
PDMD P421	Clerkship Clinical Neurology (may be taken after PDMD P334 and/or PCED P387, and must be selected if PDMD P334 or PCED P387 has not already been completed)	
PDMD P428	Clerkship Infectious Disease (cannot be taken in addition to PDMD P338)	
PDMD P445	Clerkship in Peripheral Vascular Disease (cannot be taken in addition to PDMD P332)	
<b>Total Credit Hours</b>		<b>196.15</b>

## Contacts

### Program Web Address:

<https://podiatry.temple.edu/academics/curriculum-and-residencies>

### Submission Address for Application

#### Materials:

<https://aacpmas.liaisoncas.com/>

### Mailing Address for Application Materials:

Temple University School of Podiatric Medicine  
Office of Admissions  
148 N. 8th Street  
Philadelphia, PA 19107

### Department Contacts:

#### Admissions:

Temple University School of Podiatric Medicine  
tuspmdm@temple.edu  
215-625-5451

#### Financial Aid:

TUSPM Office of Student Financial Services  
215-625-5447

## College of Public Health

The College of Public Health is a global leader in the discovery, dissemination and integration of health-related research and practice. We prepare future generations of professionals through an intellectual environment that incorporates interdisciplinary collaboration, critical thinking and innovation to instill a commitment to ethical practice and lifelong learning. Exemplary research, teaching and service are informed by our engagement with professional and community, regional, national and global partners.

The College of Public Health engages in exciting, innovative research and supports talented, committed researchers. Investigations focus on medical interventions, social and behavioral inquiries, and animal and basic science. Inquiries are frequently interdisciplinary, crossing departmental and collegial lines, and draw on resources from across the University. The college's research mission entails:

- increasing faculty productivity in grants and published research;
- encouraging faculty to seek research funds creatively from such non-governmental sources as corporations and foundations;
- promoting collaborative research;
- developing a research infrastructure supported by best practices and outstanding staff;
- creating students' awareness of faculty research and opportunities for research assistantships;
- providing research opportunities for students; and
- ensuring sufficient support to train faculty, students, administrators and staff in the uses of new technologies.

The College of Public Health is also committed to excellence in fieldwork and clinical education. We believe that academic preparation must be complemented with a well-designed and mentored real-world experience that transforms classroom and laboratory learning into a dynamic, field-based demonstration of professional attitudes, skills and abilities. Our students benefit from the college's location in a metropolitan area filled with diverse and highly regarded healthcare, human services and other non-medical agencies promoting health of individuals and communities. Our network of partnering agencies includes top-rated hospitals and rehabilitation centers, wellness clinics, state and federal government agencies, public and private schools, community health and human services agencies, research centers and private practice offices. Field/clinical education can also begin on campus at clinics and research centers operated by departments in the College of Public Health, through placements with intercollegiate athletics, and at Temple University Hospital. To learn more about the integral role of clinical and field education in the College of Public Health, click to explore your area of interest:

- Athletic Training MSAT Clinical Education
- Epidemiology MPH Field Education
- Health Policy and Management MPH Field Education
- Nursing DNP Clinical Education
- Nutrition MPH Field Education
- Physical Therapy DPT Clinical Education
- Social and Behavioral Sciences MPH Field Education
- Social Work MSW Clinical Education
- Speech, Language and Hearing Science MA Clinical Education

As noted, graduate students in many of the College of Public Health's degree programs engage in required clinical/field education experiences at facilities both on and off the University's campuses. Many of these placements may require the student to have personal health insurance. Additionally, many require a criminal background check, Act 33/34 clearances, and perhaps a drug screen. Failure to maintain personal health insurance or the results of background clearances may limit and potentially eliminate placement options for students. This, in turn, can result in an inability to meet graduation requirements. The college cannot ensure clinical field placements if a student fails to meet the requirements or maintain health insurance. Additionally, conviction of a misdemeanor, felony, or felonious or illegal act may prevent a student from becoming credentialed and/or licensed to practice in certain professions. Applicants are encouraged to review the requirements for the particular program in which they are interested, as well as the licensure/credentialing rules in the state(s) in which they are interested in working to review their eligibility.

In Fall 2015, the College of Public Health introduced a common College Core course requirement for all incoming graduate students. The course, HRPR 5001 Current and Emerging Issues in Public Health and Health Professions, is completely online and designed such that students can complete the modules at their own pace over the course of their degree program. Tuition is not charged for the course since it carries no credit. However, it is a required pass/fail course, and students will not be eligible for graduation unless the course is completed. The course requires graduate students to complete a set of six learning modules that address core elements of health, including guiding principles, practices and guidelines. Students then have the option to select an additional six modules from a menu of modules. Each module includes a video presentation, PowerPoint slides, additional resources and a short quiz. A minimum grade of 80% on each module is required to pass the course. Program directors and faculty advisors work closely with students to explain the modules, discuss appropriate timing for their completion, and monitor progress toward completion before graduation.

**Beginning in Fall 2020, all incoming students in the College of Public Health are required to have a laptop.** Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

Ultimately, the goal of our diverse population of students and highly recognized faculty is to enhance the quality of life for all.

## Graduate Programs and Certificates

- Applied Biostatistics MPH (p. 789)
- Applied Physical Activity and Health Promotion MS (p. 792)
- Athletic Training MSAT (p. 792)
- Athletic Training DAT (p. 795)
- Communication Sciences and Disorders PhD (p. 797)

- Environmental Health MPH (p. 799)
- Environmental Health MS (p. 802)
- Epidemiology MPH (p. 803)
- Epidemiology MS (p. 806)
- Epidemiology PhD (p. 808)
- Health Informatics MS (p. 813)
- Health Informatics PhD (p. 816)
- Health Policy and Health Services Research PhD (p. 820)
- Health Policy and Management MPH (p. 824)
- Neuromotor Science MS (p. 828)
- Neuromotor Science PhD (p. 830)
- Nursing DNP (p. 833)
- Nutrition MPH (p. 837)
- Occupational Therapy OTD (p. 840)
- Occupational Therapy Transitional Program OTD (p. 843)
- Physical Therapy DPT (p. 845)
- Public Health Data Science MS (p. 848)
- Recreational Therapy MS (p. 850)
- Social and Behavioral Sciences MPH (p. 853)
- Social and Behavioral Sciences PhD (p. 857)
- Social Work MSW (p. 861)
- Speech, Language and Hearing Science MA (p. 865)
- Graduate Certificate: Clinical Health Services Research (p. 870)
- Graduate Certificate: Global Health (p. 871)
- Graduate Certificate: Health Informatics (p. 872)
- Graduate Certificate: Interdisciplinary Health Communication (p. 873)
- Graduate Certificate: Maternal and Child Health (p. 875)
- Graduate Certificate: Nutrition (p. 876)
- Graduate Certificate: Public Health Law Research (p. 877)
- Graduate Certificate: Public Health Preparedness and Response (p. 878)

## Graduate Faculty

*William Aaronson III*, Associate Professor, Department of Health Services Administration and Policy, College of Public Health; PhD, Temple University.

*Sarah Bauerle Bass*, Associate Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, Temple University.

*Lisa M. Bedore*, Professor, Department of Communication Sciences and Disorders, College of Public Health; PhD, Purdue University.

*Janet P. Bettger*, Professor, Department of Health and Rehabilitation Sciences, College of Public Health; ScD, Boston University.

*Bradley N. Collins*, Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, State University of New York at Binghamton.

*Melissa Dichter*, Associate Professor, Department of Social Work, College of Public Health; PhD, University of Pennsylvania.

*Susan B. Dickey*, Associate Professor, Department of Nursing, College of Public Health; PhD, University of Pennsylvania.

*Jeffrey N. Draine*, Professor, Department of Social Work, College of Public Health; PhD, University of Pennsylvania.

*Levent Dumenci*, Professor, Department of Epidemiology and Biostatistics, College of Public Health; PhD, Iowa State University.

*Karin Eyrich-Garg*, Associate Professor, Department of Social Work, College of Public Health; PhD, Washington University in St. Louis.

*Jay S. Fagan*, Professor Emeritus, Department of Social Work, College of Public Health; PhD, Columbia University.

*Jennifer Orlet Fisher*, Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, The Pennsylvania State University.

*Heather M. Gardiner*, Associate Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, State University of New York at Buffalo.

*Matthew Hall*, Assistant Professor, Department of Communication Sciences and Disorders, College of Public Health; PhD, University of California San Diego.

*Inkyu Han*, Associate Professor, Department of Epidemiology and Biostatistics, College of Public Health; PhD, Rutgers, The State University of New Jersey.

*Chantelle Hart*, Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, Case Western Reserve University.

*Elizabeth Heller Murray*, Assistant Professor, Department of Communication Sciences and Disorders, College of Public Health; PhD, Boston University.

*Shivayogi V. Hiremath*, Assistant Professor, Department of Health and Rehabilitation Sciences, College of Public Health; PhD, University of Pittsburgh.

*Ilene L. Hollin*, Assistant Professor, Department of Health Services Administration and Policy, College of Public Health; PhD, Johns Hopkins University.

*Cheryl A. Hyde*, Associate Professor, Department of Social Work, College of Public Health; PhD, University of Michigan.

*Jennifer K. Ibrahim*, Associate Professor, Department of Health Services Administration and Policy, College of Public Health; PhD, University of California Berkeley.

*Laura Johnson*, Assistant Professor, Department of Social Work, College of Public Health; PhD, Rutgers, The State University of New Jersey.

*Resa M. Jones*, Associate Professor, Department of Epidemiology and Biostatistics, College of Public Health; PhD, University of Minnesota.

*Emily Keshner*, Professor Emerita, Department of Health and Rehabilitation Sciences, College of Public Health; EdD, Columbia University.

*Julia Kobulsky*, Assistant Professor, Department of Social Work, College of Public Health; PhD, Case Western Reserve University.

*Erin R. Kulick*, Assistant Professor, Department of Epidemiology and Biostatistics, College of Public Health; PhD, Columbia University.

*Stephen J. Lepore*, Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, University of California Irvine.

*Edwin Maas*, Associate Professor, Department of Communication Sciences and Disorders, College of Public Health; PhD, San Diego State University.

*Nadine Martin*, Laura H. Carnell Professor, Department of Communication Sciences and Disorders, College of Public Health; PhD, Temple University.

*Philip McCallion*, Professor, Department of Social Work, College of Public Health; PhD, University at Albany, State University of New York.

*Bryan P. McCormick*, Professor, Department of Health and Rehabilitation Sciences, College of Public Health; PhD, Clemson University.

*Gabriella M. McLoughlin*, Assistant Professor, Department of Kinesiology, College of Public Health; PhD, University of Illinois at Urbana-Champaign.

*Elizabeth A. Pfeiffer*, Associate Professor, Department of Health and Rehabilitation Sciences, College of Public Health; PhD, Nova Southeastern University.

*James J. Reilly*, Professor, Department of Communication Sciences and Disorders, College of Public Health; PhD, University of Pennsylvania.

*Nancy L. Rothman*, Professor, Department of Nursing, College of Public Health; EdD, Temple University.

*Mark Salzer*, Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, University of Illinois at Urbana-Champaign.

*David B. Sarwer*, Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, Loyola University Chicago.

*Krista Schroeder*, Assistant Professor, Department of Nursing, College of Public Health; PhD, Columbia University.

*Brittany Schuler*, Assistant Professor, Department of Social Work, College of Public Health; PhD, University of Maryland Baltimore.

*Jing Shen*, Assistant Professor, Department of Communication Sciences and Disorders, College of Public Health; PhD, University of California San Diego.

*Laura Siminoff*, Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, Johns Hopkins University.

*Gretchen A. Snethen*, Associate Professor, Department of Health and Rehabilitation Sciences, College of Public Health; PhD, Indiana University.

*Mark Stoutenberg*, Associate Professor, Department of Kinesiology, College of Public Health; PhD, University of Miami.

*Chang Su*, Assistant Professor, Department of Health Services Administration and Policy, College of Public Health; PhD, Xi'an Jiaotong University.

*Gabriel Tajeu*, Assistant Professor, Department of Health Services Administration and Policy, College of Public Health; DrPH, University of Alabama at Birmingham.

*Elizabeth Thomas*, Assistant Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, University of Nebraska-Lincoln.

*Christopher Thompson*, Assistant Professor, Department of Health and Rehabilitation Sciences, College of Public Health; PhD, University of Illinois.

*Gina Tripicchio*, Assistant Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, University of North Carolina at Chapel Hill.

*Elizabeth Van Nostrand*, Associate Professor, Department of Health Services Administration and Policy, College of Public Health; JD, Tulane University.

*Carolina Villamil Grest*, Assistant Professor, Department of Social Work, College of Public Health; PhD, University of Southern California.

*Christopher Wheldon*, Assistant Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, University of South Florida.

*Robin T. Wilson*, Associate Professor, Department of Epidemiology and Biostatistics, College of Public Health; PhD, University of Iowa.

*W. Geoffrey Wright*, Professor, Department of Health and Rehabilitation Sciences, College of Public Health; PhD, Brandeis University.

*Huanmei Wu*, Professor, Department of Health Services Administration and Policy, College of Public Health; PhD, Northeastern University.

*Recai Yucel*, Professor, Department of Epidemiology and Biostatistics, College of Public Health; PhD, The Pennsylvania State University.

*Yaara Zisman-Ilani*, Assistant Professor, Department of Social and Behavioral Sciences, College of Public Health; PhD, University of Haifa.

## Applied Biostatistics MPH

### COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Public Health in Applied Biostatistics.

### About the Program

The Master of Public Health in Applied Biostatistics is a unique and newly developed degree that responds to the growing need for master's-trained professionals with expertise in advanced biostatistical methods. The program is designed to train professionals in the field of public health who have a clear understanding of and expertise in the use, statistical application and interpretation of large and complex data sets; of the critical importance of valid study designs and analytic methods; and of the application of hypothesis-based development and statistical programming and testing.

Students complete their studies with the fundamental critical thinking skills and statistical/programming competencies necessary for public health practice related to Applied Biostatistics in accordance with Council on Education for Public Health (CEPH) standards. Applied Biostatistics courses address topics such as database coding and development; environmental surveillance; multivariate biostatistics, including the use of regression models and multifactorial analysis; research design; and risk assessment and statistical analysis in human disease. Students in the Applied Biostatistics program are trained in the MPH core competencies

while gaining skills to use and apply multiple statistical program packages, including SAS and R; to develop appropriate study designs based on appropriate research questions; and to interpret and present study results to various audiences. Thus, the MPH in Applied Biostatistics at Temple University is particularly poised to foster interdisciplinary research and train students to work in an interdisciplinary environment.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students can complete the degree program through evening classes and online courses. Full-time students usually complete the program within two academic years. Part-time students usually take three to four years to complete their degree.

**Interdisciplinary Study:** Interdisciplinary MPH coursework, research and interactions with students and faculty in other departments are encouraged to give students as broad a perspective as possible so as to excel in the complex, diverse and dynamic arena of public health. Through associations with the Center for Obesity Research and Education, Center for Women's Health, and others, students have access to over 100 faculty at Temple University and additional regional scholars who are actively involved in programs, research and teaching in public health. Further, as with other MPH degree programs offered by the College of Public Health, the MPH in Applied Biostatistics can be undertaken as part of these dual MPH degree programs:

- DMD/MPH with Temple University's Kornberg School of Dentistry
- JD/MPH with Temple University's Beasley School of Law
- MD/MPH with the Lewis Katz School of Medicine at Temple University
- MHA/MPH with Temple University's Fox School of Business and Management
- MPP/MPH with Temple University's College of Liberal Arts
- MS Health Informatics/MPH within the Temple University College of Public Health
- MSW/MPH with the Temple University School of Social Work

For more information, visit <https://www.temple.edu/academics/dual-degree-programs>.

**Affiliation(s):** Locally, the program has long-standing research affiliations with The Food Trust, Fox Chase Cancer Center, Health Federation of Philadelphia, Philadelphia Department of Public Health, Public Health Management Corporation (PHMC), School District of Philadelphia, Temple University Health System, and numerous other community health agencies. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

**Study Abroad:** Short-term intensive study abroad courses are offered as part of the MPH program of study. These courses are offered during the Summer and are open to both undergraduate and graduate students.

**Accreditation:** The MPH is fully accredited by the Council on Education for Public Health (CEPH). Achieving accreditation in 1985, Temple's MPH program is one of the longest established accredited MPH programs in community health in the country.

**Areas of Specialization:** The MPH degree program is offered in six specialty fields of study:

- Applied Biostatistics (APBIO)
- Environmental Health (EH)
- Epidemiology (EPI)
- Health Policy and Management (HPM)
- Nutrition (NUTR)
- Social and Behavioral Sciences (SBS)

Students in the MPH program may complete transcripted College of Public Health certificate programs by taking their 9 credits of electives in the relevant coursework. For questions about certificates, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Job Prospects:** Graduates with an MPH in Applied Biostatistics are employed in research institutions, such as universities and medical centers; at government agencies at the federal level, such as the Centers for Disease Control and Prevention, as well as local and state governments; and in private industry, including pharmaceutical firms, in positions such as research associates and statisticians.

**Licensure/Certification:** Students who complete an MPH at Temple University are eligible to sit for the Certified in Public Health (CPH) exam offered by the National Board of Public Health Examiners and the Certified Health Education Specialist (CHES®) exam offered by the National Commission for Health Education Credentialing, Inc. (NCHEC). For more information about credentialing in public health, visit <https://www.nche.org/>.

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the professor. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program. Exceptions to this policy relate to formal certificate programs.

**Financing Opportunities:** The Graduate School awards fellowships on a competitive basis only to students with outstanding academic records who are admitted to Temple University for the Fall term. Applicants who wish to be considered for fellowships must apply no later than January 26 for consideration for the Fall term. The Admissions Committee of the Department of Epidemiology and Biostatistics nominates outstanding students for these awards, but the Graduate Board's Fellowship Committee makes all award decisions.

Limited Teaching and Research Assistantships are available in the College of Public Health. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to or at the application deadline are reviewed for eligibility for Teaching Assistant (TA) positions. TAs are required to work 20 hours per week in any combination of teaching assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs, and the Graduate School. To be considered for a Teaching or Research Assistantship, complete an application form that is sent to students upon admission to the MPH program. The completed application must be returned to [publichealth@temple.edu](mailto:publichealth@temple.edu) to be considered.

The College of Public Health has a limited number of scholarship opportunities available for MPH students, as shown at <https://cph.temple.edu/admissions/scholarships>. Students may also be eligible for financial support through the Office of Student Financial Services.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

All applicants to the MPH program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with academic competence. If the applicant has been out of school for more than 5 years, ensure that letters are provided by professional colleagues who can discuss your relevant academic skills, including critical thinking, research and writing.

**Coursework Required for Admission Consideration:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social sciences and writing.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0. No prerequisites must be met to apply to the MPH program at Temple University, but strong grades in mathematics and/or statistics, social sciences and writing are preferred.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** Write a well-considered 500- to 1,000-word statement of purpose that articulates your interests in public health and our program in particular. Craft your statement to specifically address the following questions:

- Why are you pursuing the MPH in Applied Biostatistics, and what are your particular areas of interest in public health?
- How does the MPH in Applied Biostatistics best fit your public health interests?
- What are your career goals, and how will this degree help you to achieve these goals?
- What are your plans in the first few years after graduation?

### Standardized Test Scores:

GRE: Optional. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. If submitted, scores above the 50th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151. If GRE scores are not submitted, it is recommended that the applicant's GPA is 3.25 or greater in mathematics and statistics courses. This provides important information on the applicant's quantitative abilities required for the program. Applications that do not include GRE scores and do not meet the mathematics/statistics GPA must provide some evidence

of quantitative abilities either through prior experiences, the personal statement and/or letters of recommendation.

Standardized tests considered in lieu of the GRE include DAT, GMAT, MCAT, OAT and PCAT. The LSAT, which is also considered for some MPH specialties, is not accepted when applying for Applied Biostatistics or Epidemiology.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an MPH program accredited by the Council on Education for Public Health (CEPH) may be transferred into the MPH. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The MPH program director approves the transfer of credits based on a review of course materials provided by the student. The maximum number of credits a student may transfer is 9.

**Clearances:** The MPH program requires students to complete fieldwork education. In the MPH program, it is the fieldwork site that determines the clearances, such as criminal background check and FBI fingerprinting, needed by a student. The results of these clearances determine whether a student may be onboarded at a respective site.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 42

*Required Courses:*



Code	Title	Credit Hours
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
EPBI 5201	Epidemiological Research Methods I	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Applied Biostatistics Courses</b>		
EPBI 8012	Multivariable Biostatistics	3
EPBI 8204	Multilev Mod in Int Res	3
EPBI 8301	Clinical Research Methods in Public Health	3
<b>Applied Biostatistics Elective</b>		
Select one from the following:		3
ENVH 8016	Human Health Risk Analysis	
EPBI 8201	Structural Equation Modeling	
EPBI 8307	Systematic Reviews	
EPBI 9187	Biostat Cnslt Practicum	
<b>Electives</b>		
Select two from the following: <sup>1,2</sup>		6
ENVH 8016	Human Health Risk Analysis	
EPBI 8201	Structural Equation Modeling	
EPBI 8307	Systematic Reviews	
EPBI 9187	Biostat Cnslt Practicum	
<b>MPH Fieldwork Experience</b>		
EPBI 9289	MPH Fieldwork I	3
EPBI 9389	MPH Fieldwork II	3
<b>Total Credit Hours</b>		<b>42</b>

1

Courses not taken to fulfill the Applied Biostatistics elective above may be selected to fulfill one or both of these general electives.

2

Other electives may be selected with approval.

**Minimum Grade to be Earned for All Required Courses: B-**

#### **Culminating Events:**

##### *Fieldwork Practicum:*

Students are required to synthesize and integrate the knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice through an internship or practicum experience with a public health agency, health services organization, or under the supervision of a faculty preceptor. The MPH fieldwork experience serves as the applied practice experience as required by the Council on Education for Public Health (CEPH), the accrediting body for schools and programs of public health, for completion of the Master of Public Health degree. In addition, this applied practice experience provides the student with the opportunity to develop expertise in a topic area and to contribute original and independent observations to a body of knowledge.

Part-time fieldwork experiences are available for students who work full-time.

#### *Evaluative Paper:*

For the applied practice experience to fulfill the requirements of EPBI 9289 and EPBI 9389, MPH in Applied Biostatistics students are expected to complete a fieldwork experience. The required deliverable for the MPH fieldwork requirement is a final evaluative paper. Students must demonstrate their proficiency and the application of theory and principles in the paper.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/applied-biostatistics-mph-hp-apbs-mph>

### **Department Information:**

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
epibio@temple.edu  
215-204-8726

### **Submission Address for Application Materials:**

<https://sophas.liasoncas.com/>

### **Department Contacts:**

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Graduate Program Director:*

Aimee J. Palumbo, PhD, MPH  
Associate Professor  
aimee.palumbo@temple.edu  
215-204-4023

#### *Chairperson:*

Resa M. Jones, MPH, PhD  
Associate Professor  
resa.jones@temple.edu  
215-204-7881

## **Applied Physical Activity and Health Promotion MS**

COLLEGE OF PUBLIC HEALTH

### **About the Program**

This program is not accepting applications for the 2023-2024 academic year.

## **Athletic Training MSAT**

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Science in Athletic Training.

## About the Program

The Master of Science in Athletic Training (MSAT) degree is accredited by the Commission on the Accreditation of Athletic Training and prepares students to become certified athletic trainers who are at the forefront of clinical practice and education. This degree program was designed in response to the decision by the Commission on Accreditation of Athletic Training Education (CAATE), the Board of Certification, and the National Athletic Trainers' Association to transition to an entry-level master's degree as a requirement for certification eligibility. These groups all recognize the increasing scope of practice for athletic trainers.

Temple University established the professional MSAT degree as it phased out the BSAT. As a leader in the education of future and current certified athletic trainers for more than 30 years, Temple secured its position by implementing a program in 2016, ahead of the curve, given that the master's degree was not required until 2022. Temple's geographical location, access to quality field experiences, alumni network, cutting-edge healthcare research, and dedicated faculty provide a unique and competitive educational experience.

Students graduating from the MSAT program are able to:

- clinically apply the foundational behaviors of professional practice;
- demonstrate knowledge and competency within the content areas of athletic training;
- serve as leaders and advocates to enhance clinical and patient outcomes;
- practice with cultural competence and professional integrity;
- advance the athletic training profession;
- effectively communicate with peer healthcare professionals, patients and athletic program administrators; and
- apply evidence-based decision-making to clinical practice to increase patient outcomes and satisfaction.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students are expected to complete their two years of coursework on a full-time basis.

**Interdisciplinary Study:** Interdisciplinary study is available within the department and through other departments in the University.

**Ranking:** While rankings of individual programs and the department are not conducted in the profession, the programs at Temple University have excellent reputations.

**Accreditation:** The MSAT degree program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE).

**Areas of Specialization:** The Athletic Training Practice Domains, as identified by the Board of Certification, encompass five main areas:

1. Injury/illness prevention and wellness promotion
2. Examination, assessment and diagnosis
3. Immediate and emergency care
4. Therapeutic intervention
5. Healthcare administration and professional responsibility

As a result of the uniqueness of Temple University's College of Public Health and its research areas, areas of distinctiveness also include:

- Advanced concussion education
- Evidence-based practice components

**Job Prospects:** Graduates are prepared to work as entry-level clinical certified athletic trainers in various traditional settings (e.g., high schools, universities, clinics, hospitals); to apply for advanced research-based education (e.g., PhD) or clinical education (e.g., DAT); or to practice in an emerging area (e.g., dance, military).

**Licensure/Certification:** Graduates of the MSAT degree program are eligible to take the Board of Certification examination to become a certified athletic trainer. For more information on the certification process, see <https://www.bocac.org/>. For more information about state regulatory processes, see <https://members.nata.org/gov/state/regulatory-boards/map.cfm>.

**Non-Matriculated Student Policy:** Non-matriculated students are welcome to take classes in the department, assuming they have the requisite knowledge to be successful in the coursework.

**Financing Opportunities:** For information on financial aid, contact the Office of Student Financial Services at [sfs@temple.edu](mailto:sfs@temple.edu) or 215-204-2244.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer II:* June 1

All applicants to the MSAT program must apply via the Athletic Training Centralized Application Service (ATCAS). The system can be accessed at <https://atcas.liasoncas.com/>.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into the applicant's aptitude for graduate study. These should be submitted at <https://atcas.liasoncas.com/>.

**Coursework Required for Admission Consideration:** Required coursework includes:

- Biology
- Chemistry
- Exercise Physiology
- General or Sport Psychology
- Human Anatomy and Physiology (8 credits)
- Nutrition
- Physics
- Statistics

Prerequisites are not required to have been taken while an undergraduate. The courses may be completed at a local community college or any accredited institution of higher education. Prerequisites may be in progress at the time of the initial application, but must be completed and verified on one's ATCAS application by June 1 of the year

for which application is made. Questions regarding prerequisite work should be directed to the Program Director.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of a baccalaureate degree.

**Statement of Goals:** A statement of one to two pages should be clearly written and well-thought-out. It should be submitted at <https://atcas.liaisoncas.com/>.

**Standardized Test Scores:**

GRE: Optional. If submitted, scores must be sent directly to ATCAS.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** A current resume that includes the applicant's undergraduate GPA and any relevant clinical and/or research experiences, if applicable, is required to be submitted at <https://atcas.liaisoncas.com/>.

**Interview:** Selected applicants are invited to interview via video chat at a mutually convenient time for the faculty interviewer(s) and the applicant.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** At the discretion of the Program Director, relevant graduate courses taken at other accredited universities may be considered for transfer credit to the student's program. The maximum number of credits a student may transfer is 6.

**Clearances:** The Athletic Training MSAT program requires students to complete clinical/field education experiences at facilities both on and off Temple University's campuses. These placements require students to have a physical exam, immunizations with titers, and a PPD test. Many placements also require criminal background checks, Act 33/34 clearances, and perhaps a drug screen. Students may also be required to maintain personal health insurance. The results of these requirements may limit and potentially eliminate placement options for the student, thus resulting in their inability to meet graduation requirements. The College cannot ensure clinical field placements if the individual fails to meet the requirements or maintain health insurance. Additionally, conviction of a

misdemeanor, felony, or felonious or illegal act may prevent the student from becoming certified to practice athletic training.

**Other:** Students must submit the following items in preparation for the Fall practicum courses after admission to the program but prior to August 1:

- Emergency Cardiac Care Certification
- FBI Fingerprint Check
- PA Criminal Background Check
- PA Department of Public Welfare Child Abuse Clearance
- Proof of Physical Examination, including blood titers/boosters where applicable
- PPD Skin Test for Tuberculosis Exposure

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 53*

*Required Courses:*

Code	Title	Credit Hours
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>MSAT Core Courses</b>		
ATHT 5142	Foundations of Athletic Training	4
ATHT 5143	Orthopedic Assessment I	3
ATHT 5244	Orthopedic Assessment II	3
ATHT 5245	General Medical Conditions in Athletic Training	4
ATHT 5247	Leadership for the Entry-Level Athletic Trainer	1
ATHT 5287	Practicum in Athletic Training I	3
ATHT 5443	Organization and Administration in Athletic Training	3
ATHT 5444	Therapeutic Interventions in Athletic Training	5
ATHT 5445	Considerations for Healing	4
ATHT 5487	Practicum in Athletic Training II	3
ATHT 5644	Applied Research in Athletic Training	3
ATHT 5645	Board of Certification Examination Preparation	2
ATHT 5687	Practicum in Athletic Training III	2
ATHT 5808	Advanced Sport Concussion	3
ATHT 5851	Current Trends in Athletic Training	3
ATHT 5852	Transition to Athletic Training Clinical Practice	3
ATHT 5888	Immersive Clinical Practice in Athletic Training (2 terms)	2
ATHT 5988	Advanced Immersive Clinical Practice in Athletic Training	2
<b>Total Credit Hours</b>		<b>53</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

## Recommended Course of Study Outlined by Year and Term

Year 1		Credit Hours
<b>Summer II</b>		
ATHT 5142	Foundations of Athletic Training	4
ATHT 5143	Orthopedic Assessment I	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Credit Hours</b>		<b>7</b>
<b>Fall</b>		
ATHT 5244	Orthopedic Assessment II	3
ATHT 5245	General Medical Conditions in Athletic Training	4
ATHT 5247	Leadership for the Entry-Level Athletic Trainer	1
ATHT 5287	Practicum in Athletic Training I	3
<b>Credit Hours</b>		<b>11</b>
<b>Spring</b>		
ATHT 5444	Therapeutic Interventions in Athletic Training	5
ATHT 5445	Considerations for Healing	4
ATHT 5487	Practicum in Athletic Training II	3
<b>Credit Hours</b>		<b>12</b>
<b>Year 2</b>		
<b>Fall</b>		
ATHT 5443	Organization and Administration in Athletic Training	3
ATHT 5644	Applied Research in Athletic Training	3
ATHT 5645	Board of Certification Examination Preparation	2
ATHT 5687	Practicum in Athletic Training III	2
ATHT 5888	Immersive Clinical Practice in Athletic Training <sup>2</sup>	1
<b>Credit Hours</b>		<b>11</b>
<b>Spring</b>		
ATHT 5808	Advanced Sport Concussion <sup>3</sup>	3
ATHT 5851	Current Trends in Athletic Training	3
ATHT 5852	Transition to Athletic Training Clinical Practice	3
ATHT 5888	Immersive Clinical Practice in Athletic Training <sup>4</sup>	1
ATHT 5988	Advanced Immersive Clinical Practice in Athletic Training <sup>5</sup>	2
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>53</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

ATHT 5888 is scheduled to be taken in August in the Fall "Early Term Start" academic period. See the official academic calendar on the Office of the University Registrar website.

3

ATHT 5808 is scheduled to be taken midterm of the Spring term in the 7-week "7B" academic period. To determine the first day of class, see the official academic calendar on the Office of the University Registrar website.

4

ATHT 5888 is scheduled to be taken December to January in the Spring "Early Term Start" academic period. See the official academic calendar on the Office of the University Registrar website.

5

ATHT 5988 is scheduled to be taken at the start of the regular Spring term in the 7-week "7A" academic period.

**Minimum Grade to be Earned for All Required Courses: B-**

### Culminating Event:

#### *Fieldwork Practica:*

Students in the MSAT program are assigned by the program to a clinical education site and preceptor (i.e., a certified athletic trainer or physician who has successfully completed preceptor training offered by program faculty) each Fall and Spring academic term. Affiliation agreements with over 30 clinical education sites and 60 approved clinical preceptors currently are in place. Immersive clinical education experiences may also be completed outside of the Greater Philadelphia region.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/athletic-training-msat-hp-atht-msat>

### Department Information:

Dept. of Health and Rehabilitation Sciences  
230 Pearson Hall  
1800 N. Broad Street  
Philadelphia, PA 19121-3302  
215-204-2153

### Submission Address for Application Materials:

<https://atcas.liaisoncas.com/>

### Department Contacts:

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Director of Athletic Training Education:*

Jamie Mansell, PhD, LAT, ATC  
jmansell@temple.edu  
215-204-2153

## Athletic Training DAT

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Athletic Training.

## About the Program

The Doctor of Athletic Training (DAT) program is offered online by the Department of Health and Rehabilitation Sciences in the College of Public Health at Temple University, which has been a leader in athletic training education for more than 30 years. Establishing the DAT keeps Temple University ahead of the curve in athletic training education as the master's becomes the entry-level degree in 2022.

Offering the DAT online increases student access to a unique and innovative world-class graduate education. The combination of outstanding faculty, administrative support, and online instructional resources allows Temple University to provide an excellent education to an ever-growing market of students seeking quality graduate education. Students seek advising and complete or update advising contracts with the Program Director. Faculty work closely with students to select courses, develop an evidence-based project question, and complete the capstone project.

The DAT is geared toward advancing clinical knowledge of currently practicing certified athletic trainers. The program is designed to enhance clinical decision-making by allowing the practicing certified athletic trainer to utilize evidence-based techniques, including the identification and interpretation of current literature to improve patient outcomes. Delivering the program exclusively online allows a greater audience to be reached and collaboration with people from diverse backgrounds and with varied experiences to occur.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** While not recommended, the degree program can be completed on a part-time basis. This must be approved by the Program Director.

**Ranking:** While rankings of individual programs and the department are not conducted in the profession, the programs at Temple University have excellent reputations.

**Job Prospects:** As of 2021, the U.S. Bureau of Labor Statistics projects a 17% growth in athletic training until 2031, which is above the standard workforce demand rate.

**Licensure/Certification:** Applicants for and graduates of the DAT program must be certified athletic trainers. This program does not allow for students to take the Board of Certification exam. Applicants interested in becoming a certified athletic trainer should consider Temple's accredited Master of Science in Athletic Training (MSAT) program.

**Non-Matriculated Student Policy:** DAT coursework is available only to matriculated students.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* July 1

All applicants to the DAT program must apply via SOPHAS Express. The system can be accessed at <https://sophasexpress.liaisoncas.com/>.

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or immediate work supervisor, who can provide insight into the applicant's aptitude for graduate study. These should be submitted at SOPHAS Express.

**Coursework Required for Admission Consideration:** All applicants must be certified athletic trainers via the procedures specified by the Board of Certification.

**Master's Degree in Discipline/Related Discipline:** A master's degree is required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of a baccalaureate degree.

**Statement of Goals:** A statement of one to two pages should be clearly written and well-thought-out. It should be submitted at SOPHAS Express.

**Standardized Test Scores:**

GRE: Optional, although applicants who believe GRE scores would complement their application are encouraged to submit scores to SOPHAS Express using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS Express using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** A current resume that includes the applicant's GPA and relevant clinical and research experiences is required to be submitted at SOPHAS Express.

**Interview:** Selected applicants are invited to interview via video chat at a mutually convenient time for the faculty interviewer(s) and the applicant.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree:* 36

*Required Courses:*

Year 1		
Fall		Credit Hours
ATHT 8601	Research Appraisal and Clinical Application	3
ATHT 8602	Clinical Grand Rounds I: Lower Extremity	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Credit Hours</b>		<b>6</b>
Spring		
ATHT 8603	Clinical Grand Rounds II: Upper Extremity	3
ATHT 8604	Evidence Based Decision Making in Athletic Training	3
<b>Credit Hours</b>		<b>6</b>
Summer		
ATHT 5808	Advanced Sport Concussion	3
ATHT 8611	Leadership and Cultural Considerations in Athletic Training	3
<b>Credit Hours</b>		<b>6</b>
Year 2		
Fall		Credit Hours
ATHT 8344	Rehabilitation Methods and Techniques for Sports-Related Injuries	3
Elective		3
<b>Credit Hours</b>		<b>6</b>
Spring		
ATHT 8343	Advanced Topics in Athletic Training	3
Elective		3
<b>Credit Hours</b>		<b>6</b>
Summer		
ATHT 9601	Capstone in Athletic Training	6
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>36</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

**Minimum Grade to be Earned for All Required Courses:** B-

**Culminating Event:***Capstone Project:*

Students are assigned a faculty advisor to guide the Capstone Project, which must be grounded in evidence-based practice. The doctoral capstone is developed over a series of academic terms. Outcomes from the Capstone Project are expected to be incorporated into clinical practice.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/athletic-training-dat-hp-atht-dat>

**Department Information:**

Dept. of Health and Rehabilitation Sciences  
230 Pearson Hall  
1800 N. Broad Street  
Philadelphia, PA 19121-3302  
215-204-2153

**Submission Address for Application Materials:**

<https://sophasexpress.liaisoncas.com/>

**Department Contacts:***Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*Director of Athletic Training Education:*

Jamie Mansell, PhD, LAT, ATC  
jmansell@temple.edu  
215-204-2153

**Communication Sciences and Disorders PhD**

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Philosophy in Communication Sciences and Disorders.

**About the Program**

The PhD program in Communication Sciences and Disorders seeks to bring students to a level of education at which they may participate as scholars in the discipline. It is the program's objective to provide doctoral students with a base of information sufficiently broad that they understand the range of their discipline, yet deep enough in a chosen area of specialization to enable them to comfortably assume positions of leadership. The program emphasizes education in specific methods of research, appropriate to the student's area of specialization, reaching a level at which the graduate will be able to make original and valuable contributions to the knowledge of the field. A final objective is to infuse students with the spirit of scientific inquiry and wisdom in the methods and philosophy of science to place their own contributions, and the contributions of others, in a proper perspective with regard to theoretical and philosophical positions and trends. It is anticipated that graduates will contribute to the discipline as leaders and exemplars in the areas of teaching, research, administration and clinical services.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program may be completed on a full- or part-time basis.

**Interdisciplinary Study:** Students often take elective coursework outside the department in disciplines such as biostatistics, education and psychology.

**Affiliation(s):** Cooperative efforts have been established with Temple University Hospital and Lewis Katz School of Medicine, the Camden School District, MossRehab, and the School District of Philadelphia.

**Areas of Specialization:** Areas of concentration are Speech-Language Pathology with emphases in adult language disorders, child language and literacy development and disorders, and motor speech.

**Job Prospects:** Graduates are prepared for careers in universities and research institutions.

**Non-Matriculated Student Policy:** Departmental permission is required for registration in graduate classes. A maximum of 9 credits earned as a non-matriculated student may be applied toward the degree.

**Financing Opportunities:** Research and Teaching Assistantships may be available. Preference will be given to students who have already earned a graduate-level degree and who elect to attend full-time. Contact the Department of Communication Sciences and Disorders to inquire.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

All applicants to the PhD program in Communication Sciences and Disorders must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from professors, employers or colleagues who are able to evaluate the applicant's research potential. One letter must be from a previous professor, advisor or research supervisor.

**Coursework Required for Admission Consideration:** Applicants must demonstrate coursework taken in statistics and probability.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Communication Disorders, Education, Linguistics or Psychology is required.

**Statement of Goals:** In approximately 500 to 1,000 words, address your background, academic and professional goals, and how your interests fit with the program.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Writing Sample:** A writing sample that is expository in nature, e.g., a chapter of a thesis, a convention paper, and/or a paper from senior undergraduate or master's level coursework, should be submitted.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Advanced Standing:** The student's advisor recommends advanced standing to the PhD Program Director based on a review of prior coursework and experience. Coursework taken as part of a degree program for which a degree has been conferred is not considered for advanced standing. The maximum number of advanced standing credits awarded is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 45

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
CSCD 5411	Psycholinguistics	3
CSCD 5730	Topics in Speech, Language and Hearing (2 terms)	6
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
PHIL 5216	Philosophy of Science	3
<b>Research and Statistics Courses<sup>1</sup></b>		
EPBI 5002	Biostatistics	3
EPBI 5201	Epidemiological Research Methods I	3
EPBI 8012	Multivariable Biostatistics	3
EPBI 8212	Grantsmanship in Health Research	3
HRPR 5999	Research Experience in Health Professions	0
<b>Statistics and Methodology Electives</b>		
Select two from the following: <sup>2</sup>		6
ABA 5305	Single Subject Research Design	
EPBI 8201	Structural Equation Modeling	
EPBI 8204	Multilevel Mod in Int Res	
<b>Content Area Electives</b>		
Select three from the following: <sup>3</sup>		9
CSCD 8727	Written Language Development and Disorders	
CSCD 8729	Neurocognitive Language Disorders	

HRPR 8985	Teaching in Higher Education: Health Professions	
HRPR 8987	Teaching in Higher Education Practicum	
NMS 9627	Neuromotor Science 3: Cognition and Learning	
PSY 8005	Affective Neuroscience	
PSY 8310	Topical Seminar in Cognitive Psychology	
PSY 8312	Core Course in Cognitive Psychology	
PSY 8513		
<b>Research Courses</b>		
CSCD 9994	Preliminary Examination Preparation	1
CSCD 9998	Pre-Dissertation Research	2
CSCD 9999	Dissertation Research	3
<b>Total Credit Hours</b>		<b>45</b>

1

With approvals from the mentor, PhD Program Director, and department chair, students may select alternate courses to fulfill the Research and Statistics course requirement.

2

With approval from the PhD Program Director, students may select alternate courses as Statistics and Methodology electives.

3

With approval from the PhD Program Director, students may select alternate courses as Content Area electives.

**Minimum Grade to be Earned for All Required Courses: B-**

#### **Culminating Events:**

##### *Preliminary Examination:*

The preliminary examination is undertaken when the student has completed all other requirements for advancement to candidacy, but no later than the end of the third year of study. Specifically, students are expected to have produced at least two publishable manuscripts and completed all coursework prior to registering for the exam. Students should have successfully presented the first-year project and second-year evaluation.

The examination itself includes a written examination and an oral defense. The written examination consists of three to five questions developed by the student's committee and approved by the PhD Program Director and department chair. Students have two weeks to complete the written examination. At least one question addresses methodology and the other two are on distinct but related topics close to the student's area of research. Upon submission of the written examination, the student orally defends the written responses in a meeting of graduate faculty. At a minimum, the student's committee, the PhD Program Director, and department chair are present. The student must pass the preliminary examination in no more than two attempts. The Doctoral Advisory Committee evaluates the exam on a pass/fail basis. All judgments are by committee consensus.

##### *Proposal:*

The preliminary examination prepares students to write a data-driven dissertation proposal, which is a prospectus with literature review and proposed methodology. When the student has successfully defended the preliminary examination and submitted an approved prospectus, the student has ascended to doctoral candidacy.

##### *Dissertation:*

The dissertation is an original study that makes a significant and publishable contribution to the field. It should demonstrate a thorough

knowledge of the theoretical and empirical literature in the area of investigation. It should also be of sound and rigorous methodology. Original research of quality appropriate for publication in a first-tier national journal is expected.

Graduate School guidelines for announcing the defense are followed. Notice is given through postings, email and listserv announcements. The defense lasts two hours.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/communication-sciences-and-disorders-phd-hp-cscd-phd>

### **Department Information:**

Dept. of Communication Sciences and Disorders  
110 Weiss Hall  
1701 N. 13th Street  
Philadelphia, PA 19122-6085  
cph@temple.edu  
215-204-7543

### **Submission Address for Application Materials:**

<https://sophas.liaisoncas.com/>

### **Department Contacts:**

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Program Director:*

Jodi Reich, PhD  
jodi.reich@temple.edu  
215-204-1821

#### *Chairperson:*

Lisa Bedore, PhD  
lisa.bedore@temple.edu  
215-204-7543

## **Environmental Health MPH**

### COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Public Health in Environmental Health.

### **About the Program**

Environmental factors and sustainable development are major determinants of health in individuals and communities. The Master of Public Health in Environmental Health is a professional degree that prepares students for practice-oriented careers in promoting and protecting public health by identifying and addressing environmental factors that may cause or contribute to disease, injury or other adverse health outcomes. Students in this program gain a comprehensive understanding of the relationships between human health and the natural and built environment, including topics such as air, water and soil quality; climate change; emerging environmental health threats; environmental justice; food safety; hazardous waste management;



occupational health; and sustainability. They also develop skills in epidemiology, exposure and risk assessment, policy analysis, as well as communication and advocacy. The program is grounded in the core MPH competencies and disciplines of public health, with an emphasis on examining environmental factors and policies that affect the public's health and sustainable environments of communities.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students can complete the degree program through evening classes and online courses. Full-time students usually complete the program within two academic years. Part-time students usually take three to four years to complete their degree.

**Interdisciplinary Study:** Interdisciplinary MPH coursework, research, and interactions with students and faculty in other departments are encouraged to give students as broad a perspective as possible to excel in the complex, diverse, and dynamic state of public health. Through associations with the Center for Obesity Research and Education, Center for Women's Health, and others, students have access to over 100 faculty at Temple University and additional regional scholars who are actively involved in programs, research, and teaching in public health. Further, as with the other four MPH degree programs offered by the College of Public Health, the MPH in Environmental Health can be undertaken as part of these dual MPH degree programs:

- DMD/MPH with Temple University's Kornberg School of Dentistry
- JD/MPH with Temple University's Beasley School of Law
- MD/MPH with the Lewis Katz School of Medicine at Temple University
- MHA/MPH with Temple University's Fox School of Business and Management
- MPP/MPH with Temple University's College of Liberal Arts
- MS Health Informatics/MPH within the Temple University College of Public Health
- MSW/MPH with the Temple University School of Social Work

For more information, visit <https://www.temple.edu/academics/dual-degree-programs>.

**Affiliation(s):** Locally, the program has long-standing research affiliations with The Food Trust, Fox Chase Cancer Center, Health Federation of Philadelphia, Philadelphia Department of Public Health, Public Health Management Corporation (PHMC), School District of Philadelphia, Temple University Health System, and numerous other community health agencies. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

**Study Abroad:** Short-term intensive study abroad courses are offered as part of the MPH program of study. These courses are offered during the Summer and are open to both undergraduate and graduate students.

**Accreditation:** The MPH is fully accredited by the Council on Education for Public Health (CEPH). Achieving accreditation in 1985, Temple's MPH program is one of the longest established accredited MPH programs in community health in the country.

**Areas of Specialization:** The MPH degree program is offered in six specialty fields of study:

- Applied Biostatistics (APBIO)
- Environmental Health (EH)
- Epidemiology (EPI)
- Health Policy and Management (HPM)
- Nutrition (NUTR)
- Social and Behavioral Sciences (SBS)

Students in the MPH program may complete transcripted College of Public Health certificate programs by taking their 9 credits of electives in the relevant coursework. For questions about certificates, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Job Prospects:** Graduates with an MPH in Environmental Health have positions in a wide range of health-related settings, including academia; consulting firms; government agencies at the local, state or federal level; healthcare sectors (e.g., hospitals, clinics); nonprofit organizations; and private industry. Graduates are employed as adjunct faculty, consultants, environmental health specialists, evaluation specialists, infection control coordinators, marketing specialists, prevention specialists, project directors, research directors, and senior health educators. Virtually all students are placed within three to six months of graduation.

**Licensure:** Students who complete an MPH at Temple University are eligible to sit for the Certified in Public Health (CPH) exam offered by the National Board of Public Health Examiners and the Certified Health Education Specialist (CHES®) exam offered by the National Commission for Health Education Credentialing, Inc. (NCHEC). For more information about credentialing in public health, visit <https://www.nchech.org/>.

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the professor, whether the coursework is taken in the on-campus or online format. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program. Exceptions to this policy relate to formal certificate programs. For more information, contact Natasha Benoit, Senior Academic Advisor, at [nbenoit@temple.edu](mailto:nbenoit@temple.edu).

**Financing Opportunities:** The Graduate School awards fellowships on a competitive basis only to students with outstanding academic records who are admitted to Temple University for the Fall term. Applicants who wish to be considered for fellowships must apply no later than January 26 for consideration for the Fall term. The Admissions Committee of the Department of Epidemiology and Biostatistics nominates outstanding students for these awards, and the Graduate Board's Fellowship Committee makes all award decisions.

Limited Teaching and Research Assistantships are available in the College of Public Health. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to or at the application deadline are reviewed for eligibility for Teaching Assistant (TA) positions. TAs can work 5 to 20 hours per week in any combination of teaching assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs, and the Graduate School. To be considered for a Teaching or Research Assistantship, complete an application form that is sent to students upon admission to the MPH program. The completed application must be returned to [publichealth@temple.edu](mailto:publichealth@temple.edu) to be considered.

The College of Public Health has a limited number of scholarship opportunities available for MPH students, as shown at <https://cph.temple.edu/admissions/scholarships>. Students may also be eligible for financial support through the Office of Student Financial Services.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

All applicants to the MPH program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with academic competence. If the applicant has been out of school for more than 5 years, ensure that letters are provided by professional colleagues who can discuss your relevant academic skills, including critical thinking, research and writing.

**Coursework Required for Admission Consideration:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social sciences and writing.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0. No prerequisites must be met to apply to the MPH program at Temple University, but applicants with a GPA of 3.25 or greater in mathematics/statistics courses and strong grades in writing are preferred.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** Write a well-considered 500- to 1,000-word statement of purpose that articulates your interests in public health and our program in particular. Craft your statement to specifically address the following questions:

- Why are you pursuing the MPH in Environmental Health, and what are your particular areas of interest in public health?
- How does the MPH in Environmental Health best fit your public health interests?
- What are your career goals, and how will this degree help you to achieve these goals?
- What are your plans in the first few years after graduation?

### Standardized Test Scores:

GRE: Optional. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. If submitted, scores above the 50th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151. If GRE scores are not submitted, it is recommended that the applicant's GPA

is 3.25 or greater in mathematics and statistics courses. This provides important information on the applicant's quantitative abilities required for the program. Applications that do not include GRE scores and do not meet the mathematics/statistics GPA must provide some evidence of quantitative abilities either through prior experiences, the personal statement and/or letters of recommendation

Standardized tests considered in lieu of the GRE include DAT, GMAT, LSAT, MCAT, OAT, and PCAT.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an MPH program accredited by the Council on Education for Public Health (CEPH) may be transferred into the MPH. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The MPH program director approves the transfer of credits based on a review of course materials provided by the student. The maximum number of credits a student may transfer is 9.

**Clearances:** The MPH program requires students to complete fieldwork education. In the MPH program, it is the fieldwork site that determines the clearances, such as criminal background check and FBI fingerprinting, needed by a student. The results of these clearances determine whether a student may be onboarded at a respective site.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 42

*Required Courses:*

Code	Title	Credit Hours
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
EPBI 5201	Epidemiological Research Methods I	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Environmental Health Core Courses</b>		
ENVH 8016	Human Health Risk Analysis	3
ENVH 8207	Environmental Epidemiology	3
EPBI 8012	Multivariable Biostatistics	3
<b>Environmental Health Elective <sup>1</sup></b>		
Select one from the following:		3
ENVH 5013	Global Environmental Health	
ENVH 5309	Water, Sanitation and Public Health	
ENVH 8019	Environmental Policy and Regulation	
ENVH 8206		
ENVH 8306		
EPBI 5003	Spatial Analysis in Public Health	
<b>Electives <sup>2, 3</sup></b>		
Select two from the following:		6
ENVH 5013	Global Environmental Health	
ENVH 5309	Water, Sanitation and Public Health	
ENVH 8019	Environmental Policy and Regulation	
ENVH 8206		
ENVH 8306		
EPBI 5003	Spatial Analysis in Public Health	
EPBI 8204	Multilev Mod in Int Res	
EPBI 8213	Cancer Epidemiology	
<b>MPH Fieldwork Experience</b>		
ENVH 9289	MPH Fieldwork I	3
ENVH 9389	MPH Fieldwork II	3
<b>Total Credit Hours</b>		<b>42</b>

1

Other electives may be taken with approval.

2

Courses not taken to fulfill the Environmental Health Elective above may be selected to fulfill one or both of these general electives.

3

Other electives may be selected with approval.

**Minimum Grade to be Earned for All Required Courses: B-**

#### Culminating Events:

##### Fieldwork Practicum:

Students are required to synthesize and integrate the knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice through an internship or practicum experience

with a public health agency, health services organization, or under the supervision of a faculty preceptor. The MPH fieldwork experience serves as the applied practice experience as required by the Council on Education for Public Health (CEPH), the accrediting body for schools and programs of public health, for completion of the Master of Public Health degree. In addition, this applied practice experience provides the student with the opportunity to develop expertise in a topic area and to contribute original and independent observations to a body of knowledge.

Part-time fieldwork experiences are available for students who work full-time.

#### Evaluative Paper:

For the applied practice experience to fulfill the requirements of ENVH 9289 and ENVH 9389, MPH in Environmental Health students are expected to complete a fieldwork experience. The required deliverable for the MPH fieldwork requirement is a final evaluative paper. Students must demonstrate their proficiency and the application of theory and principles in the paper.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/environmental-health-mp-hp-envh-mp-h>

### Department Information:

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
epibio@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

#### Admissions:

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### Graduate Program Director:

Aimee J. Palumbo, PhD, MPH  
Associate Professor  
aimee.palumbo@temple.edu  
215-204-4023

#### Chairperson:

Resa M. Jones, MPH, PhD  
Associate Professor  
resa.jones@temple.edu  
215-204-7881

## Environmental Health MS

COLLEGE OF PUBLIC HEALTH

## About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Epidemiology MPH

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Public Health in Epidemiology.

### About the Program

The Master of Public Health in Epidemiology is a professional degree program for students who desire fundamental and applied training in the public health sciences with a focus on epidemiological study design, disease surveillance methods, bioethics of population-based research, and core biostatistical methods. This practice-oriented program prepares students to successfully work in public health and applied epidemiology agencies, including conducting disease surveillance within government public health agencies; directing community demonstration and clinical trials research; and evaluating and running screening programs and other preventative health services in the broad areas of public health practice and health policy. The program is grounded in the core MPH competencies and disciplines of public health with an emphasis on epidemiological techniques. It covers the application of epidemiological research methods with an emphasis on developing research and methodological skills and critically evaluating current epidemiological studies.

The Department of Epidemiology and Biostatistics also offers a small research-intensive MS in Epidemiology, which is a research-oriented degree intended for students who desire to learn the advanced concepts and methods of epidemiology and apply those concepts to a unique population-based study through the completion of a master's-level thesis project.

Applicants to the MPH in Epidemiology can choose between our on-campus and online programs, both of which adhere to the same competency-based curriculum and content. Only the delivery formats differ:

- The on-campus format is designed for students who prefer live interaction with instructors and fellow students, access to campus activities, and the opportunity to choose local Philadelphia fieldwork placements with the assistance of our fieldwork coordinator. Students can enroll full-time or part-time. While some courses may be offered online or in hybrid formats, most of the coursework is delivered in person over a full 16-week academic term during evening hours.
- The online format is designed for working professionals interested in completing their degree remotely with courses that include both synchronous classes held via Zoom and asynchronous activities. Students can enroll full-time or part-time. A fieldwork coordinator works with students to find appropriate placement in their preferred geographic location.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main for in-person instruction or Online

**Full-Time/Part-Time Status:** Students can complete the degree program through evening classes and online courses. Full-time students usually

complete the program within two academic years. Part-time students usually take three to four years to complete their degree.

**Interdisciplinary Study:** Interdisciplinary MPH coursework, research and interactions with students and faculty in other departments are encouraged to give students as broad a perspective as possible to excel in the complex, diverse and dynamic state of public health. Through associations with the Center for Obesity Research and Education, Center for Women's Health, and others, students have access to over 100 faculty at Temple University and additional regional scholars who are actively involved in programs, research and teaching in public health. Further, as with other MPH degree programs offered by the College of Public Health, the MPH in Epidemiology can be undertaken as part of these dual MPH degree programs:

- DMD/MPH with Temple University's Kornberg School of Dentistry
- JD/MPH with Temple University's Beasley School of Law
- MD/MPH with the Lewis Katz School of Medicine at Temple University
- MHA/MPH with Temple University's Fox School of Business and Management
- MPP/MPH with Temple University's College of Liberal Arts
- MS Health Informatics/MPH within the Temple University College of Public Health
- MSW/MPH with the Temple University School of Social Work

For more information, visit <https://www.temple.edu/academics/dual-degree-programs>.

**Affiliation(s):** Locally, the program has long-standing research affiliations with The Food Trust, Fox Chase Cancer Center, Health Federation of Philadelphia, Philadelphia Department of Public Health, Public Health Management Corporation (PHMC), School District of Philadelphia, Temple University Health System, and numerous other community health agencies. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

**Study Abroad:** Short-term intensive study abroad courses are offered as part of the MPH program of study. These courses are offered during the Summer and are open to both undergraduate and graduate students.

**Accreditation:** The MPH is fully accredited by the Council on Education for Public Health (CEPH). Achieving accreditation in 1985, Temple's MPH program is one of the longest established accredited MPH programs in the country.

**Areas of Specialization:** The MPH degree program is offered in six specialty fields of study:

- Applied Biostatistics (APBIO)
- Environmental Health (EH)
- Epidemiology (EPI)
- Health Policy and Management (HPM)
- Nutrition (NUTR)
- Social and Behavioral Sciences (SBS)

Students in the MPH program may complete transcripted College of Public Health certificate programs by taking their 9 credits of electives in the relevant coursework. For questions about certificates, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Job Prospects:** Graduates with an MPH in Epidemiology have positions in a wide range of health-related settings, including state and local public health departments, community-based organizations, voluntary health agencies, health maintenance organizations, pharmaceutical companies, hospitals, clinics, schools and other public health-related work sites. Graduates are employed as HIV/AIDS coordinators, infection control coordinators, project directors, program evaluation specialists, research directors, prevention specialists, environmental health specialists, protocol directors, senior health educators and consultants. Virtually all students are placed within three to six months of graduation.

**Licensure/Certification:** Students who complete an MPH at Temple University are eligible to sit for the Certified in Public Health (CPH) exam offered by the National Board of Public Health Examiners and the Certified Health Education Specialist (CHES®) exam offered by the National Commission for Health Education Credentialing, Inc. (NCHEC). For more information about credentialing in public health, visit <https://www.nchec.org/>.

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the professor, whether the coursework is taken in the on-campus or online format. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program. Exceptions to this policy relate to formal certificate programs. For more information, contact Natasha Benoit, Senior Academic Advisor, at [nbenoit@temple.edu](mailto:nbenoit@temple.edu).

**Financing Opportunities:** The Graduate School awards fellowships on a competitive basis only to students with outstanding academic records who are admitted to Temple University for the Fall term. Applicants who wish to be considered for fellowships must apply no later than January 26 for consideration for the Fall term. The Admissions Committee of the Department of Epidemiology and Biostatistics nominates outstanding students for these awards, but the Graduate Board's Fellowship Committee makes all award decisions.

Limited Teaching and Research Assistantships are available in the College of Public Health. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to or at the application deadline are reviewed for eligibility for Teaching Assistant (TA) positions. TAs can work 5 to 20 hours per week in any combination of teaching assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs, and the Graduate School. To be considered for a Teaching or Research Assistantship, complete an application form that is sent to students upon admission to the MPH program. The completed application must be returned to [publichealth@temple.edu](mailto:publichealth@temple.edu) to be considered.

The College of Public Health has a limited number of scholarship opportunities available for MPH students, as shown at <https://cph.temple.edu/admissions/scholarships>. Students may also be eligible for financial support through the Office of Student Financial Services.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

All applicants to the MPH program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with the applicant's academic competence. If the applicant has been out of school for more than 5 years, ensure that letters are provided by professional colleagues who can discuss your relevant academic skills, including critical thinking, research and writing.

**Coursework Required for Admission Consideration:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social sciences and writing.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0. No prerequisites must be met to apply to the MPH program at Temple University, but applicants with a GPA of 3.25 or greater in mathematics/statistics courses and strong grades in writing are preferred.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** Write a well-considered 500- to 1,000-word statement of purpose that articulates your interests in public health and our program in particular. Craft your statement to specifically address the following questions:

- Why are you pursuing the MPH in Epidemiology, and what are your particular areas of interest in public health?
- How does the MPH in Epidemiology best fit your public health interests?
- What are your career goals, and how will this degree help you to achieve these goals?
- What are your plans in the first few years after graduation?

### Standardized Test Scores:

GRE: Optional. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. If submitted, scores above the 50th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151. If GRE scores are not submitted, it is recommended that the applicant's GPA is 3.25 or greater in mathematics and statistics courses. This provides important information on the applicant's quantitative abilities required for the program. Applications that do not include GRE scores and do not meet the mathematics/statistics GPA must provide some evidence of quantitative abilities either through prior experiences, the personal statement and/or letters of recommendation.

Standardized tests considered in lieu of the GRE include DAT, GMAT, MCAT, OAT and PCAT. The LSAT, which is also considered for some

MPH specialties, is not accepted when applying for Applied Biostatistics or Epidemiology.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an MPH program accredited by the Council on Education for Public Health (CEPH) may be transferred into the MPH. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The MPH program director approves the transfer of credits based on a review of course materials provided by the student. The maximum number of credits a student may transfer is 9.

**Clearances:** The MPH program requires students to complete fieldwork education. In the MPH program, it is the fieldwork site that determines the clearances, such as criminal background check and FBI fingerprinting, needed by a student. The results of these clearances determine whether a student may be onboarded at a respective site.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 42*

*Required Courses:*

Code	Title	Credit Hours
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5

EPBI 5201	Epidemiological Research Methods I	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3

### Epidemiology Core Courses

EPBI 8012	Multivariable Biostatistics	3
EPBI 8202	Epidemiological Research Methods II	3
EPBI 8205	Chronic Disease Epidemiology	3
or EPBI 8206	Infectious Disease Epidemiology	

### Epidemiology Elective <sup>1</sup>

Select one from the following: 3

ENVH 8207	Environmental Epidemiology
EPBI 5205	Surveillance, Epidemics and Outbreaks
EPBI 8011	Social Epidemiology
EPBI 8207	Reproductive and Perinatal Epidemiology
EPBI 8209	Epidemiology of HIV/AIDS
EPBI 8213	Cancer Epidemiology

### Electives <sup>2</sup>

Select two from the following: 6

EPBI 5003	Spatial Analysis in Public Health
EPBI 5204	Mental Health Epidemiology
EPBI 5206	Risk Assessment and Preparedness Decision Making
EPBI 5500	Seminar in Current Issues in Public Health <sup>3</sup>
EPBI 8301	Clinical Research Methods in Public Health
EPBI 8303	Behavioral Epidemiology
EPBI 8307	Systematic Reviews

### MPH Fieldwork Experience

EPBI 9289	MPH Fieldwork I	3
EPBI 9389	MPH Fieldwork II	3

**Total Credit Hours** 42

1

Other electives may be taken with approval.

2

Courses not taken to fulfill the Epidemiology elective above may be selected to fulfill one or both of these general electives. Other electives may be taken with approval.

3

Approval required.

### Minimum Grade to be Earned for All Required Courses: B-

### Culminating Events:

*Fieldwork Practicum:*

Students are required to synthesize and integrate the knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice through an internship or practicum experience with a public health agency, health services organization, or under the supervision of a faculty preceptor. The MPH fieldwork experience serves as the applied practice experience as required by the Council on Education for Public Health (CEPH), the accrediting body for schools and programs of public health, for completion of the Master of Public Health degree. In addition, this applied practice experience provides the student

with the opportunity to develop expertise in a topic area and to contribute original and independent observations to a body of knowledge.

Part-time fieldwork experiences are available for students who work full-time.

*Evaluative Paper:*

For the applied practice experience to fulfill the requirements of EPBI 9289 and EPBI 9389, MPH in Epidemiology students are expected to complete a fieldwork experience. The required deliverable for the MPH fieldwork requirement is a final evaluative paper. Students must demonstrate their proficiency and the application of theory and principles in the paper.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/epidemiology-mph-hp-epid-mph>

### Department Information:

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

*Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*Graduate Program Director:*

Aimee J. Palumbo, PhD, MPH  
Associate Professor  
aimee.palumbo@temple.edu  
215-204-4023

*Chairperson:*

Resa M. Jones, MPH, PhD  
Associate Professor  
resa.jones@temple.edu  
215-204-7881

## Epidemiology MS

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Science in Epidemiology.

### About the Program

The conduct of epidemiological research involves the study of the distribution of disease and/or injury in human populations. The MS in Epidemiology degree is designed specifically for students interested in in-depth training and knowledge of the research techniques

appropriate to conducting epidemiological studies in a particular concentration of health research. Master's-level epidemiologists work in applied settings conducting disease surveillance and outbreak investigations or in research settings developing and evaluating research hypotheses generated to understand the effects of behavioral, biological, environmental and social factors on human health. Since epidemiology is the principal science underlying disease prevention and control programs, this training is also a basic component for other degree and training programs in public health and preventative medicine.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The program is designed to accommodate both full- and part-time students. Full-time students can earn their degree within 2 years, while part-time students typically complete the degree in 3 years.

**Interdisciplinary Study:** Students are encouraged to develop programs of study that are interdisciplinary in nature, involving coursework across departments, schools and colleges. Research in affiliated units is encouraged.

**Affiliation(s):** Locally, the program has long-standing research affiliations with The Food Trust, Fox Chase Cancer Center, Health Federation of Philadelphia, Philadelphia Department of Public Health, Public Health Management Corporation (PHMC), School District of Philadelphia, Temple University Health System, and numerous other community health agencies. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

**Study Abroad:** Temple University has campuses in Tokyo, London and Rome where independent research can be pursued under advisement.

**Accreditation:** The program is accredited by the Council on Education for Public Health (CEPH).

**Areas of Specialization:** Areas of specialization can be dictated through the area of concentration pursued by the student in their thesis research.

**Job Prospects:** Graduates of the MS in Epidemiology program are prepared to be researchers in colleges and universities or to hold research-related positions in a wide range of organizations. Graduates are employed in health systems, hospitals and clinics, public health departments, and public health and other healthcare and human service agencies. Some graduates are employed by schools at the local, state and federal levels. Graduates also work in pharmaceutical companies, nonprofit and for-profit corporations, foundations and consulting firms.

**Non-Matriculated Student Policy:** Students are permitted to take up to 9 credits of coursework before matriculation. If a student is accepted into the program, those courses may be applied toward the degree requirements. Course selection should be made in consultation with an advisor, and students should be aware that completion of coursework does not ensure admission into the program.

**Financing Opportunities:** Limited Teaching and Research Assistantships are available in the College of Public Health. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to or at the application deadline are reviewed for eligibility for Teaching Assistant (TA) positions. TAs can work 5 to 20 hours per week in any combination of teaching

assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs, and the Graduate School. To be considered for a Teaching or Research Assistantship, complete an application form that is sent to students upon admission to the MPH program. The completed application must be returned to [publichealth@temple.edu](mailto:publichealth@temple.edu) to be considered.

The College of Public Health has a limited number of scholarship opportunities available for MPH students, as shown at <https://cph.temple.edu/admissions/scholarships>. Students may also be eligible for financial support through the Office of Student Financial Services.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

All applicants to the MS in Epidemiology program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liasoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215- 204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with the applicant's academic competence and, if appropriate, research supervisors or mentors.

**Coursework Required for Admission Consideration:** Proficiency in statistical programming and a minimum of 6 credits of undergraduate quantitative and/or analytical methods (statistics, research design, etc.) are required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** Write a well-considered 500- to 1,000-word statement of purpose that articulates your interests in public health and our program in particular. Craft your statement to specifically address the following questions:

- Why are you pursuing this master's degree program, and what are your particular areas of interest in public health?
- How does the MS in Epidemiology best fit your public health interests?

- What are your career goals, and how will this degree help you to achieve those goals? What are your plans in the first few years after graduation?

### Standardized Test Scores:

GRE: Required. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. Scores above the 75th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151.

Standardized tests considered in lieu of the GRE include DAT, GMAT, MCAT, OAT and PCAT.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Interview:** An interview may be required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an accredited institution are considered for transfer into the MS in Epidemiology degree program. Such courses are reviewed by the MS Graduate Program Director to determine whether they are equivalent to coursework offered at Temple and fulfill any degree requirements. The grade must be a "B" or better in order to transfer and have been earned within five years of applying to the program. The maximum number of credits that may be transferred into the MS program is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36

*Required Courses:*



Code	Title	Credit Hours
<b>Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5002	Biostatistics	3
EPBI 5005	Applied Analysis of Health	1.5
EPBI 5201	Epidemiological Research Methods I	3
EPBI 8012	Multivariable Biostatistics	3
EPBI 8202	Epidemiological Research Methods II	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Advanced Quantitative Methods Courses</b>		
Select two from the following:		6
EPBI 5003	Spatial Analysis in Public Health	
EPBI 8201	Structural Equation Modeling	
EPBI 8204	Multilev Mod in Int Res	
EPBI 8302	Behavioral Measurement	
EPBI 8307	Systematic Reviews	
EPBI 8402	Intermediate Concepts and Methods in Health Research	
EPBI 8403	Applied Concepts and Methods in Health Research	
GUS 5062	Fundamentals of Geographical Information Systems	
GUS 5068	Census Analysis with Geographical Information Systems	
GUS 5069	GIS for Health Data Analysis	
<b>Cognate Epidemiology Electives</b>		
Select three from the following: <sup>2</sup>		9
ENVH 8207	Environmental Epidemiology	
EPBI 5204	Mental Health Epidemiology	
EPBI 5500	Seminar in Current Issues in Public Health <sup>3</sup>	
EPBI 8011	Social Epidemiology	
EPBI 8206	Infectious Disease Epidemiology or EPBI 8205 Chronic Disease Epidemiology	
EPBI 8207	Reproductive and Perinatal Epidemiology	
EPBI 8209	Epidemiology of HIV/AIDS	
EPBI 8213	Cancer Epidemiology	
EPBI 8301	Clinical Research Methods in Public Health	
EPBI 8303	Behavioral Epidemiology	
EPBI 8401	Concepts and Methods in Epidemiologic Research	
<b>Research Course</b>		
EPBI 9996	Masters Res in Pub Hlth (2 terms)	6
<b>Total Credit Hours</b>		<b>36</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

With approval, students may select alternate electives.

3

EPBI 5500 requires prior approval.

**Minimum Grade to be Earned for All Required Courses: B-**

### Culminating Event:

#### Thesis:

The master's thesis documents the student's independent research and demonstrates mastery of their primary area of interest. Thesis research is conducted under the direct supervision of an academic advisor. The specific topic for research should be of current interest in the professional community. After a research topic is selected, the student performs preliminary background research. A thesis proposal is then submitted describing the plan for further steps toward completion of the proposed research. The student may continue the research only after the proposal is approved by the committee. Presentation of methods and study results is performed upon completion of the thesis.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/epidemiology-ms-hp-epid-ms>

### Department Information:

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

#### Admissions:

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### Graduate Program Director:

Aimee J. Palumbo, PhD, MPH  
Assistant Professor  
aimee.palumbo@temple.edu  
215-204-4023

#### Chairperson:

Resa M. Jones, MPH, PhD  
Associate Professor  
resa.jones@temple.edu  
215-204-7881

## Epidemiology PhD

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Philosophy in Epidemiology.

## About the Program

The dynamic and quantitatively oriented doctoral program in Epidemiology provides advanced training in epidemiological and biologic methods. The program develops strong academic researchers in the field of Epidemiology, with a clear understanding of the patterns, causes and effects of diseases in the population, who are well-prepared to design, implement, analyze and interpret research studies investigating key epidemiological questions with the ultimate goal of improving overall population health. Working closely with faculty in the Department of Epidemiology and Biostatistics, students gain expertise in collecting data, designing instruments and research protocols, directing and conducting sophisticated and multilevel statistical analyses, interpreting data, and communicating research findings to both lay and professional audiences. All students in the Epidemiology PhD program complete common core public health course requirements, which include foundational courses in Biostatistics, Epidemiology, grantsmanship and research design. Beyond these core courses, students master specialized courses in advanced epidemiological and biostatistical methods and engage in research and scholarly productivity with faculty members in the Department of Epidemiology and Biostatistics and throughout the College.

In addition to in-depth, didactic training in epidemiological and quantitative concepts and methods, the PhD in Epidemiology program aims to foster in students the development of a public health professional identity and values. Professional development exercises are infused in didactic courses and available in other program-sponsored activities (e.g., conference attendance, departmental colloquia and brown-bag presentations, journal clubs, and professional development workshops). Doctoral trainees in Epidemiology are encouraged to take advantage of these professional development opportunities offered at various public health centers and laboratories throughout the College of Public Health and Temple University. As the next generation of academic researchers, PhD in Epidemiology students work closely with faculty mentors throughout the program and particularly during the dissertation phase on formalizing grant-writing skills, teaching in higher education, and writing papers for publications.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** Students are encouraged to develop a program of research that is interdisciplinary in nature, involving coursework and research across departments, schools and colleges that is quantitative and methodological in focus. Research in affiliated units is encouraged.

**Affiliation(s):** A number of centers and laboratories exist within the Department of Epidemiology and Biostatistics, the College of Public Health, and Temple University that are designed to study, develop and evaluate interventions aimed at resolving significant public health problems (e.g., ethnic and racial disparities in cancer, inadequate disaster preparedness, maternal and child health, obesity, tobacco exposure, violence). These centers and labs offer opportunities for research placements for doctoral students to assist students in developing research and papers for publication and presentation at conferences; provide professional socialization; help students meet and work with faculty to define dissertation projects using existing funded research studies; and may provide some funding in the form of Research Assistantships.

Specific centers and labs include the Health Behavior Research Clinic, the Maternal and Child Health Wellness Laboratory, the Risk Communication Laboratory, and the Social and Behavioral Health Intervention Laboratory. Faculty and doctoral students also are involved in research with affiliates in the Department of Nursing, Fox Chase Cancer Center, Fox School of Business and Management, Institute on Aging, Institute on Disabilities, Lew Klein School of Media and Communication, Lewis Katz School of Medicine, and School of Podiatric Medicine. Additional research opportunities at Temple University include the Institute for Survey Research, Office of Institutional Research and Assessment, and Social Science Data Library.

**Accreditation:** The program is accredited by the Council on Education for Public Health (CEPH).

**Areas of Specialization:** Areas of specialization can be dictated through the area of concentration pursued by the student in their dissertation research.

**Job Prospects:** Graduates of the PhD in Epidemiology program are prepared to become empirical quantitative researchers in academic units, nonprofit organizations, government agencies or the private sector, including pharmaceutical companies or health systems. Graduates are well trained to identify the etiology of major public health issues; conduct and analyze survey, surveillance, longitudinal, case-control and experimental data using comprehensive and complex statistical techniques; and develop their own methodologically rigorous research studies.

**Non-Matriculated Student Policy:** Non-matriculated students may take PhD courses only with the permission of the instructor. Further, 8000-level courses are not open to non-matriculated students. Completion of coursework does not ensure admission into the program.

**Financing Opportunities:** Full-time PhD students generally receive financial support through a combination of fellowships and assistantships. Research Assistants (RAs) perform supervised research activities. Teaching Assistants (TAs) may be assigned to assist in the teaching of courses, including grading examinations and papers or teaching laboratory sections. Some TAs independently teach undergraduate courses. TAs and RAs provide 20 hours of service per week. Both assistantships carry a stipend and tuition remission for up to 9 credits per term. Applications for assistantships are available from the Department of Epidemiology and Biostatistics and must be submitted by January 10 for the following Fall term. The RA/TA application requires a statement of previous teaching and/or research experience, areas of interest, and future goals; unofficial copies of transcripts; and a curriculum vitae. The department makes offers of assistantships following admission to the program.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 5

All applicants to the PhD in Epidemiology program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liasoncas.com/>.

All application materials must be received by the deadline in order to be reviewed by the PhD Admissions Committee. Admission is competitive, and students are admitted only once a year. An important component of the admissions decision is the fit between the applicant's goals,

experiences, and interests and the expertise of the faculty in the PhD program. Therefore, it is highly recommended that applicants contact the Department of Epidemiology and Biostatistics at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-8726 to discuss their areas of interest and opportunities for mentored research before applying.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's academic abilities and talents, as well as comment on the applicant's aptitude for doctoral-level study and research. Recommendations from college/university faculty members are preferred.

**Coursework Required for Admission Consideration:** Applicants are expected to have completed coursework in epidemiology, data analysis, research methods and statistics. Courses in natural, social or behavioral sciences related to health are desirable.

**Master's Degree in Discipline/Related Discipline:** A master's degree is generally required, and preference is given to applicants who have a master's degree in epidemiology, statistics or the health sciences, including behavioral medicine, environmental health, medicine or a public health discipline.

Applicants without a master's degree must meet the following minimum qualifications to be considered:

- Hold a bachelor's degree in a field related to epidemiology, statistics, biology or the health sciences;
- Have earned a GPA >3.5 in math and statistics courses; and
- Present quantitative and verbal GRE scores greater than the 75th percentile and a written score of 4.0 or higher.

Students accepted without a master's degree are required to complete foundational courses in public health, epidemiology, and biostatistics prior to beginning doctoral coursework.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, although it need not be in public health. Preference is given to applicants who have a background in epidemiology, statistics and the health sciences, including behavioral medicine, environmental health, medicine or a public health discipline.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** In no more than 750 words:

- describe important academic and research achievements and interests, and
- specify how your research interests relate to your ultimate career goals in the field of Epidemiology and to ongoing work by faculty members affiliated with the PhD in Epidemiology program.

The match between faculty and student interests is important in the admissions decision. Be sure to articulate clearly the linkages among your training goals, the expertise of our faculty, and the training emphasis

of the PhD program. For a description of faculty interests, visit the Epidemiology and Biostatistics Faculty webpage.

**Standardized Test Scores:**

GRE: Required. Scores above the 75th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Writing Sample:** Scholarly articles, technical reports or academic professional papers of which the applicant is the first author are preferred. Unless it is a published work, the writing sample should be no more than 10 pages.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Advanced Standing:** A student enrolled in the PhD in Epidemiology program may apply for advanced standing credits for graduate coursework graded "B" or better from an accredited institution. Credits for courses taken as part of a master's degree are considered. Credits for thesis work, fieldwork, clinical practice or directed projects/readings cannot be used for advanced standing credit. To be approved for advanced standing, the courses must be deemed appropriate as part of the student's training in the PhD program. For the maximum number of advanced standing credits awarded, consult the program's Senior Graduate Advisor.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree:* 45

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EPBI 8012	Multivariable Biostatistics	3
EPBI 8401	Concepts and Methods in Epidemiologic Research	3
EPBI 8402	Intermediate Concepts and Methods in Health Research	3
EPBI 8403	Applied Concepts and Methods in Health Research	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Research Methods Courses</b>		
EPBI 8212	Grantsmanship in Health Research	3
HRPR 5999	Research Experience in Health Professions	0
<b>Epidemiology Methods Courses <sup>2</sup></b>		
Select two from the following:		6
EPBI 8207	Reproductive and Perinatal Epidemiology	
EPBI 8213	Cancer Epidemiology	
EPBI 8301	Clinical Research Methods in Public Health	
EPBI 8303	Behavioral Epidemiology	
<b>Biostatistics Methods Courses <sup>2</sup></b>		
Select two from the following:		6
EPBI 5003	Spatial Analysis in Public Health	
EPBI 8204	Multilev Mod in Int Res	
EPBI 8304	Applied Statistical Methods for Incomplete Data Analysis	
EPBI 8305		
<b>Electives <sup>3</sup></b>		
Select four from the following:		12
ENVH 8016	Human Health Risk Analysis	
ENVH 8207	Environmental Epidemiology	
EPBI 5204	Mental Health Epidemiology	
EPBI 5205	Surveillance, Epidemics and Outbreaks	
EPBI 5500	Seminar in Current Issues in Public Health	
EPBI 8011	Social Epidemiology	
EPBI 8201	Structural Equation Modeling	
EPBI 8205	Chronic Disease Epidemiology	
EPBI 8206	Infectious Disease Epidemiology	
EPBI 8209	Epidemiology of HIV/AIDS	
EPBI 8302	Behavioral Measurement	
EPBI 8306		
EPBI 8307	Systematic Reviews	
GUS 5062	Fundamentals of Geographical Information Systems	
GUS 5068	Census Analysis with Geographical Information Systems	
GUS 5069	GIS for Health Data Analysis	
<b>Research Courses <sup>4</sup></b>		
EPBI 9994	Preliminary Examinations	1
EPBI 9998	Dissertation Proposal Research	2
EPBI 9999	Dissertation Research	3
<b>Total Credit Hours</b>		<b>45</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Students may select from these courses to fulfill general electives requirements if they are not taken as an epidemiology or biostatistics methods course. Other courses may be used to fulfill the methods course requirements with approval.

3

Students select electives with advisement from a faculty mentor or the program director. With approval, other electives from outside of the department can be taken. There are elective options not listed that can be chosen based on advisement and availability.

4

The Graduate School requires that students complete a minimum of 6 credits that include EPBI 9994, EPBI 9998, and EPBI 9999. Of the 6 credits, at least 2 credits must be earned in EPBI 9999.

#### Minimum Grade to be Earned for All Required Courses: B-

#### Culminating Events:

##### *Area Paper:*

Prior to sitting for the preliminary examinations, students must write a published or publishable paper in their chosen area. The purpose of the paper requirement is to demonstrate critical and interpretive knowledge in epidemiology, as well as a high proficiency in written communication and a capacity to contribute to generalizable knowledge in the field. The paper can be written in one of a variety of formats, including a systematic review, an empirical paper, or a theoretical piece relevant to the field.

The student must be the lead or sole author. The paper can be a peer-reviewed published or in-press article. Papers that are of publishable quality but have not yet been submitted or are under review for publication are also acceptable. A committee of departmental faculty members, exclusive of the student's advisor, determines if the published paper meets the writing requirement. The committee evaluates the paper and votes on whether the student has passed or failed. Students who fail the paper requirement are allowed to submit a revision by the end of the next term.

A student cannot advance to the preliminary examinations without passing the paper requirement. Failure to satisfactorily complete the area paper requirement within one term after initial submission can result in dismissal from the PhD program. Students who are entering the PhD program and have already published a peer-reviewed paper related to epidemiology can request to waive this requirement by completing a waiver application and submitting it along with the published document to the Graduate Program Director.

##### *Preliminary Examinations:*

In the term prior to taking the preliminary examinations, students should review their progress with their faculty advisor. When eligibility has been confirmed, students contact the Assistant Director of Administration and request to be registered for EPBI 9994 Preliminary Examinations in the subsequent academic term with the faculty advisor or Director of Graduate Studies.

In order to advance to doctoral candidacy, the student must pass both a written preliminary examination on methods, biostatistics, and substantive

coursework and a take-home exam, as well as an oral dissertation proposal. The written preliminary examination is given to students prior to initiating the third academic year in the program. It is largely based on material covered in required coursework and its application to theoretical and practical problems. Students meet with the Graduate Program Director in January of their second year to discuss the exam. It is suggested that students form a study group and study at least one day per week during the term prior to the examinations.

The preliminary exam is offered in the Summer term and covers the core components of students' training in epidemiology and biostatistics, as well as the specific area of concentration. The examinations consist of the following components:

- **Morning Session on Methods and Biostatistics:** Epidemiological methods and all materials in core epidemiological courses are covered. Biostatistical methods are also included, covering materials in required biostatistics courses.
- **Afternoon Session on the Substantive Area:** The student's faculty advisor writes the substantive area section of the exam, which is approved by the Director of Graduate Studies. This section covers advanced/specialty topics and related methods aligned with the student's area of interest.
- **Take-Home Exam:** Each student is provided questions and a data set from which the student needs to analyze data to provide answers to the questions provided. As such, the take-home exam represents an applied portion of the preliminary examination. The objectives of the take-home exam are to test a student's knowledge and logic in thinking through a problem and to ensure that the student is prepared to move on to the next phase in the program. The take-home exam is due approximately one week after completion of the methods, biostatistics, and substantive on-site exam.

Occasionally, a student chooses to take a course after or concurrent with the preliminary examinations. The student's faculty advisor and the Graduate Program Director must approve such an exception in advance in writing.

The Graduate Program Director coordinates the grading of the preliminary examinations. A committee of departmental faculty members review and score the examinations.

Students who fail these exams may have one opportunity to take the examinations again. A second failure results in automatic dismissal from the PhD program.

*Dissertation Proposal:*

After passing the preliminary examinations, students may enroll in EPBI 9998 Dissertation Proposal Research. When eligibility has been confirmed, students contact the Assistant Director of Administration and request to be registered for the course.

All students must form a Doctoral Advisory Committee (DAC) with the approval of the Graduate Program Director. The DAC is composed of at least three Graduate Faculty members: two members, including the Chair, must be from the PhD program faculty of the Department of Epidemiology and Biostatistics. The DAC Chair must be approved as Doctoral Graduate Faculty by the Dean of the College of Public Health and by the Graduate School. The chair is responsible for overseeing and guiding the student's progress; coordinating the responses of the committee members; and informing the student and the Graduate Program Director annually of the student's academic progress. The student should plan for an additional external reader at the time of the

final dissertation defense (see DEC below). The external reader is not present at the defense of the proposal.

To fulfill the requirements of EPBI 9998, students must submit a dissertation proposal, successfully defend it orally before their committee, apply for Institutional Review Board (IRB) approval for the proposed research, and submit the proposal to the Graduate School. Students have a maximum of one year from the time of completing their preliminary examinations to develop and defend their dissertation proposal. Thus, students may enroll in EPBI 9998 for only two terms without permission. Students needing more time may, with the support of their faculty advisor, formally petition the Graduate Program Director for an extension, although an extension is not guaranteed. Failure to meet these requirements can result in dismissal from the program.

*Dissertation:*

When eligibility has been confirmed, students contact the Assistant Director of Administration and request to be registered for EPBI 9999 Dissertation Research.

The doctoral dissertation is an original theory-based research study that makes a significant contribution to the fields of public health and epidemiology. It should expand existing knowledge and demonstrate the student's mastery of research design methods and advanced statistical techniques, particularly within the field of epidemiology. The research should be rigorous, while upholding the ethics and standards of the field. It is expected that the study will result in publication and presentation to professional audiences.

To fulfill the dissertation requirement, students must prepare and orally defend the final dissertation in a public meeting. Students present their plans for publishing their dissertation as part of their defense. Students must be enrolled continuously in EPBI 9999 until their dissertation is successfully defended. The Graduate School requires a minimum of 2 credits for the dissertation experience. Students must be enrolled in the term that they graduate.

The Dissertation Examining Committee (DEC) consists of the DAC plus at least one additional external reviewer. The external reviewer must be doctorally prepared. If this person is not a member of the Temple University Graduate Faculty, they must be approved by the Director of Graduate Studies, the Dean of the College, and the Graduate School to take part in the final dissertation examination. The DEC evaluates the student's written dissertation and oral defense, including the student's ability to articulate orally the research question; methodological approach; primary findings; interpretation of the findings; and implications for theory, research and practice. The DEC votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of a committee, the new member must be approved by the Graduate Program Director and registered with the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and work with the department coordinator for the Department of Epidemiology and Biostatistics to secure a room. This should be done at least one month in advance of the proposed date. The department coordinator arranges the time, date and room within two working days. After the time, date and room are secured, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms." This must be submitted at least 10 working

days before the defense. The department posts flyers announcing the defense, and the Graduate School lists the defense on its website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/epidemiology-phd-hp-epid-phd>

### Department Information:

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
epibio@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

#### Admissions:

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### Graduate Program Director:

Aimee J. Palumbo, PhD, MPH  
Associate Professor  
aimee.palumbo@temple.edu  
215-204-4023

#### Chairperson:

Resa M. Jones, MPH, PhD  
Associate Professor  
resa.jones@temple.edu  
215-204-7881

## Health Informatics MS

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Science in Health Informatics.

### About the Program

Health Informatics is the intersection of healthcare, information science and computer science. The MS in Health Informatics (MSHI) is an innovative, interdisciplinary, applied graduate degree program that addresses the intersection of healthcare and information technology to develop efficient systems, processes and uses of health data across the continuum of healthcare delivery to improve patient care and advance individual and population health outcomes. The MSHI is focused on the resources, devices and methods to optimize healthcare delivery. The program helps students develop the competencies and acquire the practical tools to succeed in today's digital healthcare environment. Current students include physicians, nurses, therapists, data analysts, and information technology and allied health professionals. The degree is also well suited for individuals with no prior healthcare or information technology experience.

The MSHI is available in both in-person and online formats that are designed for professionals and individuals located both within and outside the metropolitan Philadelphia region or who travel extensively for professional reasons. Course formats include in-person and hybrid courses for the in-person format, and a mix of asynchronous and synchronous courses with online synchronous sessions meeting via online conferencing and face-to-face tools for the online format. The program is offered across traditional semesters as well as two seven-week terms (six weeks in two summer sessions). For seven-week terms, students enroll in one course per six- or seven-week term and complete two courses in the length of a traditional semester.

For those interested in studying health informatics who cannot commit to pursuing a master's degree, a graduate certificate in Health Informatics (p. 872) that runs for a shorter course of seven-week terms is also offered by the College of Public Health. Coursework completed for the certificate may later be applied to the MSHI.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main and Online

**Full-Time/Part-Time Status:** The degree can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The degree program is interdisciplinary in nature with a focus on inquiry, insight and innovation. The program builds an awareness of both clinical and technical challenges in the field.

**Accreditation:** The curriculum meets the curricular requirements of the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM®), which is the accrediting body of the American Health Information Management Association (AHIMA®).

**Areas of Specialization:** For the MSHI program, students choose between two tracks:

1. The Project Track requires completion of HIM 5114 and HIM 9995.
2. The Thesis Track requires completion of HIM 8016 and HIM 9996.

**Job Prospects:** Graduates of the program obtain positions in a variety of healthcare institutions or vendor settings in a wide range of positions such as electronic health record system implementation specialist, health data analyst and project manager. A number of external organizations, including AHIMA®, the American Medical Informatics Association (AMIA®), and the Healthcare Information and Management Systems Society (HIMSS), conduct annual surveys of job prospects.

**Non-Matriculated Student Policy:** Non-matriculated students may take a maximum of 9 graduate-level credits. Upon completion of the credits, a student's academic performance is reviewed.

**Transfer Credit:** Graduate-level credits earned at another accredited institution may be evaluated during the application process. The maximum number of graduate credits a student may transfer is 6.

**Financing Opportunities:** Students in the MSHI program are generally working professionals. Therefore, funding for assistantships and academic internships is limited.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

Spring: November 1

The application process requires submission through the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liasoncas.com/>.

**Letters of Reference:**

Number Required: 3

*From Whom:* Recommendations should be obtained from faculty and/or professionals familiar with the applicant's academic competence and/or professional work experience.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** Demonstrate your professional writing ability as you describe your interest in obtaining the MSHI degree. Your statement should address the impact of informatics on health and healthcare as well as the effect a graduate degree can have on one's career.

**Standardized Test Scores:**

GRE: Optional, although applicants who believe GRE scores would complement their application are encouraged to submit scores. If submitted, quantitative and verbal scores are expected to be in the 50th percentile or above. Official GRE scores should be sent to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Program Requirements

**General Program Requirements:**

Number of Credits Required Beyond the Baccalaureate: 36

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
HIM 5101	Fundamentals of Health Informatics	3
HIM 5102	Applications of Computer Programming in Health Informatics	3
HIM 5113	Database Administration for Health Informatics Professionals	3
HIM 5128	Health Data: Standards and Interoperability	3
HIM 5129	Health Data Analysis	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Advanced Electives</b>		
Select five from the following: <sup>2</sup>		15
HIM 5106	Technology for Population Health	
HIM 5111	Technology for Healthcare Financial Management	
HIM 5112	Health Information Systems: Design and Decision Making	
HIM 5127	Privacy and Security: Protecting Healthcare Data	
HIM 5212	Application Development in Public Health	
HIM 5213	Informatics Solution Design and Development for Health Data and Its Applications	
HIM 5256	Global Health Informatics	
HIM 5299	Introduction to Language Processing and Text Mining for Health Professionals	
HIM 8216	Applications of Machine Learning for Health Informatics	
HPM 5006	Political and Economic Aspects of Health	
HPM 5122	Healthcare Quality and Safety	
<b>Track-Specific Research Courses</b>		
Select a track and complete its requirements:		6
<b>Project Track</b>		
HIM 5114	Health Informatics Project Management <sup>3</sup>	
HIM 9995	Capstone Project	
<b>Thesis Track</b>		
HIM 8016	Principles and Practices of Health Informatics Research <sup>3</sup>	
HIM 9996	Health Informatics Thesis	
<b>Total Credit Hours</b>		<b>36</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Five electives are taken from the list of Advanced Electives. With approval from the Program Director, other graduate courses, with the exception of HIM 5114 and HIM 8016, may be substituted as an advanced elective.

3

HIM 5114 and HIM 8016 can only count once. These courses may not be substituted as an advanced elective.

## Full-Time On-Campus or Online MSHI

Year 1		
Fall		Credit Hours
HIM 5101	Fundamentals of Health Informatics	3
HIM 5102	Applications of Computer Programming in Health Informatics	3
HIM 5113	Database Administration for Health Informatics Professionals	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Credit Hours</b>		<b>9</b>
Spring		
HIM 5128	Health Data: Standards and Interoperability	3
HIM 5129	Health Data Analysis	3
Advanced Elective		3
<b>Credit Hours</b>		<b>9</b>
Year 2		
Fall		
Three Advanced Electives		9
<b>Credit Hours</b>		<b>9</b>
Spring		
Both Track-Specific Courses		6
Advanced Elective <sup>2</sup>		3
<b>Credit Hours</b>		<b>9</b>
<b>Total Credit Hours</b>		<b>36</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Students may elect to complete this Advanced Elective in the Summer term of Year 1.

## Part-Time On-Campus or Online MSHI

Year 1		
Fall		Credit Hours
HIM 5101	Fundamentals of Health Informatics	3
HIM 5113	Database Administration for Health Informatics Professionals	3
<b>Credit Hours</b>		<b>6</b>

Spring		
HIM 5128	Health Data: Standards and Interoperability	3
HIM 5129	Health Data Analysis	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Credit Hours</b>		<b>6</b>

Summer		
Advanced Elective		3
<b>Credit Hours</b>		<b>3</b>

Year 2		
Fall		
HIM 5102	Applications of Computer Programming in Health Informatics	3
Two Advanced Electives		6
<b>Credit Hours</b>		<b>9</b>

Spring		
Both Track-Specific Courses		6
<b>Credit Hours</b>		<b>6</b>

Summer		
Two Advanced Electives		6
<b>Credit Hours</b>		<b>6</b>

<b>Total Credit Hours</b>		<b>36</b>
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1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

**Minimum Grade to be Earned for All Required Courses:** B-

**Culminating Event:** Successful completion of coursework is required to earn the MSHI.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/health-informatics-ms-hp-hlti-ms>

### Department Information:

Dept. of Health Services Administration and Policy  
Ritter Hall Annex, 9th Floor  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
hlthinfo@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liasoncas.com/>

### Department Contacts:

Admissions:  
CPH Office of Admissions  
cph@temple.edu



215-204-5200

*Program Director:*

Bari Dzomba, MS, PhD  
bari.dzomba@temple.edu  
215-204-1892

*Chairperson:*

Huanmei Wu, PhD  
huanmei.wu@temple.edu  
215-204-8163

## Health Informatics PhD

COLLEGE OF PUBLIC HEALTH

[Learn more about the Doctor of Philosophy in Health Informatics.](#)

### About the Program

The Health Informatics PhD program prepares graduates for leadership roles in academic health systems, as well as in the pharmaceutical, payer and public health fields. Given the the College of Public Health's diverse resources, this program incorporates interprofessional education, team science, global health, research, education, translational science and public health components into the curriculum and learner experience. Graduates are prepared for such roles as data scientist, informatics analyst, informatics director and academic faculty. Through in-person and hybrid courses, learners have access to faculty mentors; hands-on laboratory and technology infrastructure; and immersion in translational, interprofessional real-world projects.

The PhD program in Health Informatics follows the foundational domains for knowledge, skills and abilities of the American Medical Informatics Association (AMIA), while also allowing learners to collaborate with other disciplines across both the college and university to supplement their skills outside of health informatics. Core foundational concepts include informatics, tools for manipulating health data, research methods, project management, and implementation science and translation. This program includes course topics that cover electronic health records, health data exchange, standards and terminology, clinical decision support, clinical data mining, and natural language processing.

For those interested in studying health informatics who cannot commit to pursuing a doctoral degree, an MS in Health Informatics and a graduate certificate in Health Informatics (p. 872) that runs for a shorter course of seven-week terms are offered by the College of Public Health. Coursework completed for the certificate may be applied to the master's or doctoral degree.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required unless permission is received from the PhD Program Director.

**Interdisciplinary Study:** Students are encouraged to develop programs of study that are interdisciplinary in nature, involving coursework across departments, schools and colleges. Research in affiliated units is encouraged and facilitated by the Program Director.

**Affiliation(s):** A number of centers and programs exist within the College of Public Health, Temple University, and the Temple University Health System that are designed to study, develop and evaluate interventions

aimed at resolving significant public health problems (e.g., addiction, chronic disease care, ethnic and racial disparities in cancer, obesity, tobacco exposure, violence). These offer opportunities for research placements for doctoral students; assist students in developing papers for publication and presentation at conferences; provide professional socialization; help students define dissertation projects using existing funded studies; and may provide some funding in the form of Research Assistantships.

Faculty and doctoral students also are involved in research with affiliates in the Fox Chase Cancer Center, Fox School of Business and Management, Institute on Aging, Institute on Disabilities, Lew Klein College of Media and Communication, Lewis Katz School of Medicine, Public Health Law Research Program in the Beasley School of Law, School of Podiatric Medicine, and Temple University Health System.

**Accreditation:** The Health Informatics PhD program is fully accredited by the Council on Education for Public Health (CEPH).

**Job Prospects:** Graduates of the PhD program are prepared to become faculty members or researchers in colleges and universities or to hold positions related to health informatics in a wide range of organizations, including health foundations, health systems, pharmaceutical companies, and public health departments.

**Financing Opportunities:** Full-time PhD students generally receive financial support through fellowships or assistantships. Information on university-wide support opportunities can be found at <https://grad.temple.edu/admissions/costs-financial-aid-more/university-financial-support>.

Graduate assistantships are sponsored by the College of Public Health:

- Research Assistants (RAs) perform supervised research activities. Research assistantships are frequently supported by faculty grant funding, and it is anticipated the RAs will work with faculty members on new and continuing grant proposals and develop both research and grant-writing competencies.
- Teaching Assistants (TAs) may be assigned to assist in the teaching of courses, with activities that include grading examinations/papers or teaching laboratory sections. Some TAs independently teach undergraduate courses. The purpose, however, is to develop competencies in current pedagogies that prepare students for academic teaching careers.

RAs and TAs provide 20 hours of service per week. Both assistantships carry a stipend and tuition remission up to 9 credits per academic term within the prescribed course of study for the degree. Consideration for admission with an assistantship requires a description of research and teaching experience; statement of research and teaching goals; and identification of areas of interest, including identification of potential faculty mentors and articulation of career goals consistent with the mission and purpose of the Health Informatics PhD program.

Offers of admission are generally accompanied by a fellowship or assistantship offer. Students with full funding from another source (e.g., government funding or employer tuition remission) are given full consideration in the admission process. Self-funding is highly discouraged.

## Admission Requirements and Deadlines

**Application Deadline:**

Fall: January 3

All applicants to the Health Informatics PhD program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

All application materials must be received by the deadline in order to be reviewed by the PhD Admissions Committee. Admission is competitive, and students are admitted only once a year for fall matriculation. Applications are evaluated together after the deadline has passed. Applications that are completed after the deadline are held for review the following year. An important component of the admissions decision is the fit between the applicant's goals, experiences, and interests and the expertise of the faculty in the PhD program.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

#### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's academic abilities and talents, as well as comment on the applicant's aptitude for doctoral-level study and research. Recommendations from college/university faculty members are preferred.

**Coursework Required for Admission Consideration:** Applicants are expected to have completed coursework in health informatics. The following prerequisites, which do not count toward the PhD, must be satisfied, either through an MS degree or course equivalency:

Code	Title	Credit Hours
HIM 5101	Fundamentals of Health Informatics	3
HIM 5102	Applications of Computer Programming in Health Informatics	3
HIM 5129 or EPBI 5002	Health Data Analysis Biostatistics	3

Alternately, students may test out of the prerequisites or demonstrate completion of other equivalent graduate coursework. For more information, contact the PhD Program Director.

**Master's Degree in Discipline/Related Discipline:** Nearly all students admitted to the program have a master's degree. Although a master's degree specifically in Health Informatics is not required, preference is given to applicants who have a background in the health informatics discipline.

Students accepted without a master's degree are required to complete foundational courses in health informatics prior to beginning doctoral coursework.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, although it need not be in Health Informatics. Preference is given to applicants who have a background in health informatics.

**Statement of Goals:** In no more than 750 words:

- identify Health Informatics as the program for which you wish to be considered and why;
- describe important academic and research achievements and interests; and
- specify how your research interests relate to your ultimate career goals and to ongoing work by faculty members affiliated with the Health Informatics PhD program.

The match between faculty and student interests is important in the admissions decision. Be sure to articulate clearly the linkages among your training goals, the expertise of our faculty, and the training emphasis of the PhD program. For a description of faculty interests, visit the Health Services Administration and Policy Faculty webpage.

#### Standardized Test Scores:

GRE: Required. The median score of recently admitted applicants is 156 verbal and 149 quantitative. Official GRE scores should be sent to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current CV required.

**Writing Sample:** Scholarly articles, technical reports or academic professional papers are desirable. Unless it is a published work, the writing sample should be no more than 10 pages.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Advanced Standing:** A student enrolled in the Health Informatics PhD program may apply for advanced standing credits for graduate coursework graded "B" or better from an accredited institution. Credits for courses taken as part of a master's degree are considered. Credits for thesis, fieldwork, clinical practice or directed projects/readings cannot be used for advanced standing credit. To be approved for advanced standing, the courses must be deemed appropriate as part of the student's training in the Health Informatics PhD program. The maximum number of advanced standing credits awarded is 9.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 45

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
HIM 5212	Application Development in Public Health	3
HIM 5299	Introduction to Language Processing and Text Mining for Health Professionals	3
HIM 8112	Advanced Clinical Decision Support Systems	3
HIM 8129	Advanced Health Data Analytics	3
HIM 8216	Applications of Machine Learning for Health Informatics	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Research Methods Courses</b>		
EPBI 8012	Multivariable Biostatistics	3
EPBI 8212	Grantsmanship in Health Research	3
HIM 8016	Principles and Practices of Health Informatics Research	3
<b>Electives<sup>2</sup></b>		<b>15</b>
Select electives in Health Informatics:		
HIM 5114	Health Informatics Project Management	
HIM 5127	Privacy and Security: Protecting Healthcare Data	
HIM 5128	Health Data: Standards and Interoperability	
HIM 5213	Informatics Solution Design and Development for Health Data and Its Applications	
HIM 5256	Global Health Informatics	
HIM 9082	Independent Study in Health Informatics	
Select electives in Health Policy:		
HPM 5006	Political and Economic Aspects of Health	
HPM 5016	Public Health Advocacy	
HPM 8005	Theor Hlth Policy Making	
HPM 8008	Health Economics	
HPM 8014	Comparative Health Policy	
Select electives in Research Methods:		
EPBI 8201	Structural Equation Modeling	
EPBI 8204	Multilev Mod in Int Res	
EPBI 8208	Data Management and Analysis	
HPM 8013	Research Methods in Health Policy	
POLS 8002	Qualitative Research Methods	
SBS 8001	Research Methods in Public Health	
<b>Research Courses<sup>3</sup></b>		<b>6</b>
HIM 9994		
HIM 9998	Dissertation Proposal Research for Health Informatics	
HIM 9999 <sup>4</sup>		
<b>Total Credit Hours</b>		<b>45</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Students select electives in consultation with the faculty advisor or PhD Program Director. With approval, electives from outside of the department can be taken.

3

The Graduate School requires that students complete a minimum of 6 credits that include HIM 9994, HIM 9998, and HIM 9999. Of the 6 credits, at least 2 credits must be earned in HIM 9999.

4

Students enroll in HIM 9999 after their proposal is approved, taking at least 1 credit each term until the dissertation is defended and filed with the Graduate School. A minimum of 2 credits of HIM 9999 must be earned.

## Proposed Plan of Study Outlined by Year and Term

### Year 1

Fall		Credit Hours
HIM 5212	Application Development in Public Health	3
HIM 8112	Advanced Clinical Decision Support Systems	3
HIM 8129	Advanced Health Data Analytics	3
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
HIM 5299	Introduction to Language Processing and Text Mining for Health Professionals	3
HIM 8216	Applications of Machine Learning for Health Informatics	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
Elective <sup>2</sup>		3
<b>Credit Hours</b>		<b>9</b>

### Year 2

Fall		Credit Hours
EPBI 8012	Multivariable Biostatistics	3
HIM 8016	Principles and Practices of Health Informatics Research	3
Elective <sup>2</sup>		3
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
EPBI 8212	Grantsmanship in Health Research	3
Elective <sup>2</sup>		3
Elective <sup>2</sup>		3
<b>Credit Hours</b>		<b>9</b>

### Year 3

Fall		Credit Hours
HIM 9994 <sup>3</sup>		1

Elective <sup>2</sup>		3
<b>Credit Hours</b>		<b>4</b>
<b>Spring</b>		
HIM 9998	Dissertation Proposal Research for Health Informatics <sup>3</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Year 4</b>		
<b>Fall</b>		
HIM 9999	3,4	2
<b>Credit Hours</b>		<b>2</b>
<b>Spring</b>		
HIM 9999	3,4	2
<b>Credit Hours</b>		<b>2</b>
<b>Total Credit Hours</b>		<b>45</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

In consultation with the faculty advisor or PhD Program Director, students select five approved electives within Health Informatics, Health Policy and/or Research Methods, as identified above. With approval, electives from outside of the department can be taken.

3

The Graduate School requires that students complete a minimum of 6 credits that include HIM 9994, HIM 9998, and HIM 9999. Of the 6 credits, at least 2 credits must be earned in HIM 9999.

4

Students enroll in HIM 9999 after their proposal is approved, taking at least 1 credit each term until the dissertation is defended and filed with the Graduate School. A minimum of 2 credits of HIM 9999 must be earned.

#### **Minimum Grade to be Earned for All Required Courses: B-**

#### **Culminating Events:**

##### *Area Paper:*

Prior to sitting for the preliminary examinations, students must have successfully published or written a publishable paper in their chosen area of research interest. The purpose of the paper requirement is to demonstrate critical and interpretive knowledge in health informatics, as well as a high proficiency in written communication and a capacity to contribute to generalizable knowledge in the field. The student must be the lead or sole author.

The paper can be written in any of a variety of formats, including a systematic review, an empirical paper, or a theoretical piece relevant to the field. The paper can be a peer-reviewed published or in-press article. Papers that are of publishable quality but have not yet been submitted or are under review for publication are also acceptable. A committee of departmental faculty members, exclusive of the student's advisor, determines if the published paper meets the writing requirement. The committee evaluates the paper and votes on whether the student has passed or failed. Students who fail the paper requirement are allowed to submit a revision by the end of the next term.

A student cannot advance to the preliminary examinations without passing the paper requirement. Failure to satisfactorily complete the area paper requirement within one term after initial submission can result in dismissal from the PhD program. Students entering the PhD program who have already published a peer-reviewed paper can request to waive this requirement by completing a waiver application and submitting it along with the published document to the PhD Program Director.

##### *Preliminary Examinations:*

After completing the paper requirement, students are required to take the preliminary examinations. Students meet with the PhD Program Director in January of their second year to discuss the exams. It is suggested that students form a study group that meets at least one day per week during the term prior to the examinations. The exams are offered in the Summer term and cover the core components of students' training in health informatics.

The preliminary examinations should be taken prior to initiating the third academic year in the program and within one term of completing all coursework. Students are required to meet with their faculty advisor to establish eligibility before the beginning of the term in which they plan to take the examinations. When eligibility has been confirmed, students request to be registered for HIM 9994 in the subsequent academic term with the faculty advisor or PhD Program Director.

In order to advance to doctoral candidacy, the student must pass a written preliminary examination based on the required coursework in the Health Informatics PhD program and its application to theoretical and practical problems. The examination is set by a group of faculty members who are familiar with the content of the core courses and critical review of Health Informatics research. The student has five days to complete the review after receiving the research topics. An oral exam, based on the student's response to the written exam and any material from the core courses, occurs after the student successfully passes the written exam and critical review.

The PhD Program Director coordinates the grading of the preliminary examinations. A committee of departmental faculty members review and score the examinations. Students who fail these exams may have one opportunity to take the examinations again. A second failure results in automatic dismissal from the PhD program.

##### *Dissertation Proposal:*

After passing the preliminary examinations, students may enroll in HIM 9998. Students must be enrolled for 1 credit of HIM 9998 each term until they file their dissertation proposal with the Graduate School.

All students must form a Doctoral Advisory Committee (DAC) with the approval of the Director of Graduate Studies. The DAC is composed of at least three Graduate Faculty members: two members, including the chair, must be from the PhD program faculty of the Department of Health Services Administration and Policy. The DAC Chair must be approved as doctoral graduate faculty by the Dean of the College of Public Health and by the Graduate School. The Chair is responsible for overseeing and guiding the student's progress; coordinating the responses of the Committee members; and informing the student and the Director of Graduate Studies annually of the student's academic progress.

To fulfill the requirements of HIM 9998, students must submit a dissertation proposal, successfully defend it orally before their Committee, apply for Institutional Review Board (IRB) approval for the proposed research, and submit the proposal to the Graduate School. Students may enroll in HIM 9998 for only two terms without permission. Students needing more time may, with the support of

their advisor, formally petition the Director of Graduate Studies for an extension, although an extension is not guaranteed. Failure to meet these requirements can result in dismissal from the program.

Once the proposal is defended, the student is elevated to candidacy and eligible to register for dissertation credits.

#### *Dissertation:*

The doctoral dissertation is an original theory-based research study that makes a significant contribution to the field of Health Informatics. It should expand existing knowledge and demonstrate the student's mastery of theory and research methods, particularly within a concentration or specialty area. The research should be rigorous, while upholding the ethics and standards of the field. Students are expected to submit their dissertation study for publication and presentation to professional audiences.

To fulfill the dissertation requirement, students must prepare and orally defend the final dissertation in a public meeting. Students must be enrolled continuously in HIM 9999 until their dissertation is successfully defended. The Graduate School requires a minimum of 2 credits of HIM 9999. Students must be enrolled in the term that they graduate.

The Dissertation Examining Committee (DEC) consists of the DAC plus at least one additional external reviewer. The external reviewer must be doctorally prepared. If this person is not a member of the Temple University Graduate Faculty, they must be approved by the Director of Graduate Studies, the Dean of the College, and the Graduate School to take part in the final dissertation examination. The DEC evaluates the student's written dissertation and oral defense, including the student's ability to articulate orally the research question; methodological approach; primary findings; interpretation of the findings; and implications for theory, research and practice. The DEC votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of a committee, the new member must be approved by the Director of Graduate Studies and registered with the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and work with their department's administrative assistant to secure a room. This should be done at least one month in advance of the proposed date. The administrative assistant arranges the time, date and room within two working days. After the time, date and room are secured, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms." This must be submitted at least 10 working days before the defense. The department posts flyers announcing the defense, and the Graduate School lists the defense on its website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/health-informatics-phd-hp-hlti-phd>

### Department Information:

Dept. of Health Services Administration and Policy  
Ritter Hall Annex, 9th Floor  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
hlthinfo@temple.edu

215-204-8726

## Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

## Department Contacts:

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Program Director:*

Bari Dzomba, MS, PhD  
bari.dzomba@temple.edu  
215-204-1892

#### *Chairperson:*

Huanmei Wu, PhD  
huanmei.wu@temple.edu  
215-204-8163

# Health Policy and Health Services Research PhD

## COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Philosophy in Health Policy and Health Services Research.

## About the Program

The PhD program in Health Policy and Health Services Research is administered by the Department of Health Services Administration and Policy. This program is unique in that it provides students with an opportunity to develop mixed methods research to investigate the development of health policy and its impact on population health, access to care and health services utilization, and reduction in health disparities. The program trains students in the use of qualitative and quantitative research methods using primary data collection and secondary data sets to research the development, implementation and impact of health policy and health services initiatives.

The PhD program in Health Policy and Health Services Research emphasizes health services, economics and outcomes research as well as healthcare administration and leadership in investigating health disparities, public health interventions, and clinical outcomes as the basis to inform health policy. The program trains students to develop, evaluate and implement health policy at multiple levels (i.e., local, state, national, global) and in both private and public institutional settings. The PhD program:

- provides training and experiences that support interdisciplinary learning;
- promotes critical and theory-based problem-solving skills to address public health problems; and
- fosters the development of public health professional values and ethics.

All students in the Health Policy and Health Services Research PhD program complete common core course requirements that include foundational courses in comparative health policy, economics, legal

issues and theories of health policymaking, and are introduced to critical public health research methods and statistical techniques. Beyond these core courses, students take specialized courses in their chosen subdiscipline and engage in research and scholarly productivity with faculty members. Students in the program work closely with faculty members to explore key public health issues such as improving the quality and outcomes of healthcare services; examining healthcare costs; addressing health disparities; and developing policy initiatives targeting areas of population health, including aging, chronic disease, mental health, risk behaviors, substance use and violence/injury prevention.

In addition to in-depth didactic training in cross-disciplinary concepts and methods, the PhD program aims to foster the development of public health professional identities and values in its students. Professional development exercises include conference attendance, departmental colloquia and brown-bag presentations, journal clubs, and professional development workshops. Doctoral trainees are also encouraged to take advantage of professional development opportunities offered by the College of Public Health and Temple University broadly, including Dean's seminars, special workshops and seminars on grant writing, methods and teaching. Finally, students learn by working closely with faculty on research and writing papers for publications.

The student experience at Temple University is unique in that opportunities are available to improve community health and reduce public health disparities in one of the largest urban settings in the United States. Many doctoral students collaborate with community-based and healthcare-delivery organizations in Philadelphia while they conduct research projects for their dissertations. The in-person format of the Health Policy and Health Services Research PhD program allows students to work closely with faculty and peers to collaborate on research studies, meet potential mentors and collaborators, develop collegial bonds, and prepare for a future health policy career.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required unless permission is received from the PhD Program Director.

**Interdisciplinary Study:** Students are encouraged to develop programs of study that are interdisciplinary in nature, involving coursework across departments, schools and colleges. Research in affiliated units is encouraged and facilitated by the Program Director.

**Affiliation(s):** A number of centers and programs exist within the College of Public Health, Temple University, and the Temple University Health System that are designed to study, develop and evaluate interventions aimed at resolving significant public health problems (e.g., addiction, chronic disease care, ethnic and racial disparities in cancer, obesity, tobacco exposure, violence). These offer opportunities for research placements for doctoral students; assist students in developing papers for publication and presentation at conferences; provide professional socialization; help students define dissertation projects using existing funded studies; and may provide some funding in the form of Research Assistantships.

Faculty and doctoral students are also involved in research with affiliates in the Fox Chase Cancer Center, Fox School of Business and Management, Institute on Aging, Institute on Disabilities, Lew Klein College of Media and Communication, Lewis Katz School of Medicine,

Public Health Law Research Program in the Beasley School of Law, School of Podiatric Medicine, and Temple University Health System.

**Accreditation:** The Health Policy and Health Services Research PhD program is fully accredited by the Council on Education for Public Health (CEPH).

**Job Prospects:** Graduates of the PhD program are prepared to become faculty members or researchers in colleges and universities or to hold research and policy-related positions in a wide range of organizations, including health foundations, health systems, pharmaceutical companies and public health departments.

**Financing Opportunities:** Full-time PhD students generally receive financial support through fellowships or assistantships. Information on university-wide support opportunities can be found at <https://grad.temple.edu/admissions/costs-financial-aid-more/university-financial-support>.

Graduate assistantships are sponsored by the College of Public Health:

- Research Assistants (RAs) perform supervised research activities. Research assistantships are frequently supported by faculty grant funding, and it is anticipated the RAs will work with faculty members on new and continuing grant proposals and develop both research and grant-writing competencies.
- Teaching Assistants (TAs) may be assigned to assist in the teaching of courses, with activities that include grading examinations/papers or teaching laboratory sections. Some TAs independently teach undergraduate courses. The purpose, however, is to develop competencies in current pedagogies that prepare students for academic teaching careers.

RAs and TAs provide 20 hours of service per week. Both assistantships carry a stipend and tuition remission up to 9 credits per academic term within the prescribed course of study for the degree. Consideration for admission with an assistantship requires a description of research and teaching experience; statement of research and teaching goals; and identification of areas of interest, including identification of potential faculty mentors and articulation of career goals consistent with the mission and purpose of the Health Policy and Health Services Research PhD program.

Offers of admission are generally accompanied by a fellowship or assistantship offer. Students with full funding from another source (e.g., government funding or employer tuition remission) are given full consideration in the admission process. Self-funding is highly discouraged.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 3

All applicants to the Health Policy and Health Services Research PhD program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

All application materials must be received by the deadline in order to be reviewed by the PhD Admissions Committee. Admission is competitive, and students are admitted only once a year for fall matriculation. Applications are evaluated together after the deadline has passed. Applications that are completed after the deadline are held for review the

following year. An important component of the admissions decision is the fit between the applicant's goals, experiences, and interests and the expertise of the faculty in the PhD program.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

#### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's academic abilities and talents, as well as comment on the applicant's aptitude for doctoral-level study and research. Recommendations from college/university faculty members are preferred.

**Coursework Required for Admission Consideration:** Applicants are expected to have completed coursework in the behavioral, natural or social sciences related to health. A course each in statistics and in research methods are also highly preferred. The following prerequisites, which do not count toward the PhD, must also be satisfied, either through an MPH degree or course equivalency:

Code	Title	Credit Hours
EPBI 5002	Biostatistics	3
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5102	Theoretical Foundations of Health Behavior	3

**Master's Degree in Discipline/Related Discipline:** Nearly all students admitted to the program have a master's degree. Although a master's degree specifically in Public Health is not required, preference is given to applicants who have a background in the health sciences, including behavioral medicine, environmental health, epidemiology, health communication, health psychology, medicine or a public health discipline.

Students accepted without a master's degree are required to complete foundational courses in public health, epidemiology, and biostatistics prior to beginning doctoral coursework.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, although it need not be in Public Health. Preference is given to applicants who have a background in the health sciences, including behavioral medicine, environmental health, epidemiology, health communication, health psychology, medicine or a public health discipline.

**Statement of Goals:** In no more than 750 words:

- identify Health Policy and Health Services Research (HP) as the program for which you wish to be considered and why;
- describe important academic and research achievements and interests; and
- specify how your research interests relate to your ultimate career goals and to ongoing work by faculty members affiliated with the Health Policy and Health Services Research PhD program.

The match between faculty and student interests is important in the admissions decision. Be sure to articulate clearly the linkages among your training goals, the expertise of our faculty, and the training emphasis

of the PhD program. For a description of faculty interests, visit the Health Services Administration and Policy Faculty webpage.

#### Standardized Test Scores:

GRE: Required. The median score of recently admitted applicants is 156 verbal and 149 quantitative. Official GRE scores should be sent to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current CV required.

**Writing Sample:** Scholarly articles, technical reports or academic professional papers are desirable. Unless it is a published work, the writing sample should be no more than 10 pages.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Advanced Standing:** A student enrolled in the Health Policy and Health Services Research PhD program may apply for advanced standing credits for graduate coursework graded "B" or better from an accredited institution. Credits for courses taken as part of a master's degree are considered. Credits for thesis, fieldwork, clinical practice or directed projects/readings cannot be used for advanced standing credit. To be approved for advanced standing, the courses must be deemed appropriate as part of the student's training in the Health Policy and Health Services Research PhD program. The maximum number of advanced standing credits awarded is 9.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 45

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
HPM 8005	Theor Hlth Policy Making	3
HPM 8008	Health Economics	3
HPM 8014	Comparative Health Policy	3
HPM 8015	Public Health Policy and Legal Issues	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Research Methods Courses</b>		
EPBI 8012	Multivariable Biostatistics	3
EPBI 8212	Grantsmanship in Health Research	3
HPM 8013	Research Methods in Health Policy	3
<b>Electives<sup>2</sup></b>		<b>18</b>
Select electives in Health Policy Theory:		
HPM 5016	Public Health Advocacy	
HPM 5500	Seminar in Current Issues in Public Health	
POLS 8103	Legislative Behavior	
Select electives in Research Methods:		
EPBI 8201	Structural Equation Modeling	
EPBI 8204	Multilev Mod in Int Res	
EPBI 8208	Data Management and Analysis	
POLS 8002	Qualitative Research Methods	
POLS 8112	Research in State Politics	
SBS 8001	Research Methods in Public Health	
Econometric Methods for Health Services Research course		
<b>Research Courses<sup>3</sup></b>		<b>6</b>
HPM 9994	Preliminary Examinations	
HPM 9998	Dissertation Proposal Research	
HPM 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>45</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

With approval from the faculty advisor, students may select alternate electives.

3

The Graduate School requires that students complete a minimum of 6 credits that include HPM 9994, HPM 9998, and HPM 9999. Of the 6 credits, at least 2 credits must be earned in HPM 9999.

#### Minimum Grade to be Earned for All Required Courses: B-

#### Culminating Events:

##### Area Paper:

Prior to sitting for the preliminary examinations, students must have successfully published or written a publishable paper in their chosen area of research interest. The purpose of the paper requirement is to demonstrate critical and interpretive knowledge in specialized areas of one's chosen program, as well as a high proficiency in written communication and a capacity to contribute to generalizable knowledge in the field. The student must be the lead or sole author. For students

who enter the program without already having published a first-authored, peer-reviewed article, they typically initiate efforts toward this requirement during their first term of residency.

A student cannot advance to the preliminary examinations without passing the paper requirement. Failure to satisfactorily complete the area paper requirement within the specified time frame can result in dismissal from the PhD program. Students entering the PhD program who have already published a peer-reviewed paper related to their programmatic discipline can submit the published document to the Director of Graduate Studies for approval.

##### Preliminary Examinations:

Students typically take their preliminary examinations during their third year of residency in the program, after completing the paper requirement. All students are required to take the preliminary examinations prior to completing and defending their dissertation research proposal. The exams should be taken within one term of completing all coursework. Students are required to meet with their mentor and Director of Graduate Studies before the beginning of the term in which they plan to take the examinations to establish eligibility.

The preliminary examinations are designed to test fundamental core competencies of the students' training. The student must register for 1 credit of HPM 9994 in the term in which the examinations are taken. To register for HPM 9994, the student must have completed all coursework or be enrolled in final courses in the term in which the examinations are taken. Note that all Incomplete and/or "NR" grades must have been removed, and the area paper requirement must have been satisfied. Special authorization is required to register.

The preliminary examinations consist of the following components:

- A comprehensive one-week take-home written examination, with an emphasis on the student's concentration, about the scientific foundations as well as social and behavioral sciences underpinnings of public health;
- A methods exam, which is a four-hour in-class examination on research methods and statistics; and
- A two-hour oral examination to give a 30-minute scientific presentation and answer any questions from the Examination Committee. The Committee may also ask the student any questions related to the two written exams.

Students who fail these exams may have one opportunity to take the examinations again. A second failure results in automatic dismissal from the PhD program.

##### Dissertation Proposal:

After passing the preliminary examinations, students may enroll in HPM 9998. Students must be enrolled for 1 credit of HPM 9998 each term until they file their dissertation proposal with the Graduate School.

All students must form a Doctoral Advisory Committee (DAC) with the approval of the Director of Graduate Studies. The DAC is composed of at least three Graduate Faculty members: two members, including the chair, must be from the PhD program faculty of the Department of Health Services Administration and Policy. The DAC Chair must be approved as Doctoral Graduate Faculty by the Dean of the College of Public Health and by the Graduate School. The Chair is responsible for overseeing and guiding the student's progress; coordinating the responses of the Committee members; and informing the student and the Director of Graduate Studies annually of the student's academic progress.



To fulfill the requirements of HPM 9998, students must submit a dissertation proposal, successfully defend it orally before their Committee, apply for Institutional Review Board (IRB) approval for the proposed research, and submit the proposal to the Graduate School. Students may enroll in HPM 9998 for only two terms without permission. Students needing more time may, with the support of their advisor, formally petition the Director of Graduate Studies for an extension, although an extension is not guaranteed. Failure to meet these requirements can result in dismissal from the program.

Once the proposal is defended, the student is elevated to candidacy and eligible to register for dissertation credits.

#### *Dissertation:*

The doctoral dissertation is an original theory-based research study that makes a significant contribution to the field of Health Policy and Health Services Research. It should expand existing knowledge and demonstrate the student's mastery of theory and research methods, particularly within a concentration or specialty area. The research should be rigorous, while upholding the ethics and standards of the field. Students are expected to submit their dissertation study for publication and presentation to professional audiences.

To fulfill the dissertation requirement, students must prepare and orally defend the final dissertation in a public meeting. Students must be enrolled continuously in HPM 9999 until their dissertation is successfully defended. The Graduate School requires a minimum of 2 credits of HPM 9999. Students must be enrolled in the term that they graduate.

The Dissertation Examining Committee (DEC) consists of the DAC plus at least one additional external reviewer. The external reviewer must be doctorally prepared. If this person is not a member of the Temple University Graduate Faculty, they must be approved by the Director of Graduate Studies, the Dean of the College, and the Graduate School to take part in the final dissertation examination. The DEC evaluates the student's written dissertation and oral defense, including the student's ability to articulate orally the research question; methodological approach; primary findings; interpretation of the findings; and implications for theory, research and practice. The DEC votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of a committee, the new member must be approved by the Director of Graduate Studies and registered with the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and work with their department's administrative assistant to secure a room. This should be done at least one month in advance of the proposed date. The administrative assistant arranges the time, date and room within two working days. After the time, date and room are secured, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms." This must be submitted at least 10 working days before the defense. The department posts flyers announcing the defense, and the Graduate School lists the defense on its website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/health-policy-and-health-services-research-phd-hp-hphs-phd>

## Department Information:

Dept. of Health Services Administration and Policy  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-8726

## Submission Address for Application Materials:

<https://sophas.liasoncas.com/>

## Department Contacts:

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Interim Graduate Program Director:*

William E. Aaronson, PhD  
Associate Professor  
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#### *Chairperson:*

Huanmei Wu, PhD  
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215-204-8163

# Health Policy and Management MPH

## COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Public Health in Health Policy and Management.

## About the Program

The Master of Public Health in Health Policy and Management (MPH-HPM) is a terminal, professional degree designed to develop practitioners in the field of public health and health services delivery who have a clear understanding of health policy, management and health-related services and programs. Students are trained to think about the competing demands of how to manage the health of the population, improve the patient experience, and reduce system costs with a systems lens. In addition, students learn about the health policymaking process and how to evaluate the impact of policy on population health.

Applicants to the MPH-HPM program can choose between our on-campus and online programs, both of which adhere to the same competency-based curriculum and content. Only the delivery formats differ:

- The on-campus format is designed for students who prefer live interaction with instructors and fellow students; access to campus activities; and the opportunity to choose local Philadelphia fieldwork placements with the assistance of our fieldwork coordinator. Students can enroll full-time or part-time. While some courses may be offered online or in hybrid formats, most of the coursework is delivered in person over a full 16-week academic term during evening hours.

- The online format is designed for working professionals interested in a part-time program. Coursework is structured to include synchronous classes held via Zoom and asynchronous activities. A fieldwork coordinator works with students to find appropriate placement in their preferred geographic location.

For more information about the on-campus or online MPH program, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main for in-person instruction or Online

**Full-Time/Part-Time Status:** Full-time students usually complete the program within two academic years, while part-time students usually take three to four years to complete their degree.

**Interdisciplinary Study:** Interdisciplinary MPH-HPM coursework, research and interactions with students and faculty in other departments are encouraged to give students as broad a perspective as possible to excel in the complex, diverse and dynamic state of public health. Through associations with the Center for Obesity Research and Education, Center for Women's Health, and others, students have access to over 100 faculty at Temple University and additional regional scholars who are actively involved in programs, research and teaching in public health. Further, as with other MPH degree programs offered by the College of Public Health, the MPH in Health Policy and Management can be undertaken as part of these dual MPH degree programs:

- DMD/MPH with Temple University's Kornberg School of Dentistry
- JD/MPH with Temple University's Beasley School of Law
- MD/MPH with the Lewis Katz School of Medicine at Temple University
- MHA/MPH with Temple University's Fox School of Business and Management
- MPP/MPH with Temple University's College of Liberal Arts
- MS Health Informatics/MPH within the Temple University College of Public Health
- MSW/MPH with the Temple University School of Social Work

For more information, visit <https://www.temple.edu/academics/dual-degree-programs> or contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Affiliation(s):** Locally, the program has long-standing research affiliations with Children's Hospital of Philadelphia, The Food Trust, Fox Chase Cancer Center, Health Federation of Philadelphia, Health Promotion Council, Maternity Care Coalition, Mazzone Center, Philadelphia Department of Behavioral Health and Intellectual disAbility Services, Philadelphia Department of Public Health, Prevention Point, Public Health Management Corporation (PHMC), School District of Philadelphia, Temple University Health System, and numerous other community health agencies. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

**Study Abroad:** Short-term intensive study abroad courses are offered as part of the MPH program of study. These courses are offered during the Summer and are open to both undergraduate and graduate students.

**Accreditation:** The MPH is fully accredited by the Council on Education for Public Health (CEPH). Achieving accreditation in 1985, Temple's MPH

program is one of the longest established accredited MPH programs in the country.

**Areas of Specialization:** The MPH degree program is offered in six specialty fields of study:

- Applied Biostatistics (APBIO)
- Environmental Health (EH)
- Epidemiology (EPI)
- Health Policy and Management (HPM)
- Nutrition (NUTR)
- Social and Behavioral Sciences (SBS)

Students in the Health Policy and Management MPH program may complete transcripted College of Public Health certificate programs by taking their 9 credits of electives in the relevant coursework. For questions about certificates, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Job Prospects:** Graduates with an MPH-HPM degree hold positions in a wide range of health-related settings, including clinics, community-based organizations, federally qualified health centers, health insurers, hospitals and health systems, pharmaceutical companies, public health-related work sites, schools, state and local public health departments, and voluntary health agencies. Graduates are prepared to assume leadership positions in a variety of health services and public health organizations as environmental health specialists, evaluation specialists, healthcare administrators, HIV/AIDS coordinators, infection control coordinators, marketing specialists, prevention specialists, project directors, research directors, senior health educators and consultants. Virtually all full-time students are placed within three to six months of graduation.

**Licensure/Certification:** Students who complete an MPH at Temple University are eligible to sit for the Certified in Public Health (CPH) exam offered by the National Board of Public Health Examiners and the Certified Health Education Specialist (CHES®) exam offered by the National Commission for Health Education Credentialing, Inc. (NCHEC). For more information about credentialing in public health, visit <https://www.nche.org/>. Graduates may also be eligible for certification and advancement in a number of health professional associations such as the American College of Healthcare Executives (ACHE).

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the professor, whether the coursework is taken in the on-campus or online format. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program. Exceptions to this policy relate to formal certificate programs.

**Financing Opportunities:** Limited Teaching and Research Assistantships are available in the College of Public Health. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Individuals interested in a Teaching Assistant or Research Assistant position may inquire of the admissions staff. Upon admissions, interested students are sent an application for both types of positions.

The College of Public Health and the Department of Health Services Administration and Policy offer a limited number of tuition scholarships to highly qualified applicants. Other available scholarships are listed at <https://cph.temple.edu/admissions/scholarships>. Students may also

be eligible for financial support through the Office of Student Financial Services.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

All applicants to the MPH program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with academic competence. If the applicant has been out of school for an extended period of time, ensure that letters are provided by professional colleagues who can discuss your relevant academic skills, including critical thinking, research and writing.

**Coursework Required for Admission Consideration:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social sciences and writing. Applicants who completed prior graduate coursework or earned a graduate degree are expected to submit such documentations as this will be considered in the application review.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0.

**Statement of Goals:** In 500 to 1,000 words, address the following questions:

- Why are you pursuing the MPH in Health Policy and Management, and what are your particular areas of interest in the field?
- What are your future career goals, and what have you done either academically or professionally to guide your interest in public health and to begin preparation toward your career goals?
- What is your leadership philosophy? How effective are you at working on interdisciplinary teams?
- Are there any exceptional circumstances related to previous academic performance that you would like the Admissions Committee to consider?

### Standardized Test Scores:

GRE: Optional. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. If submitted, minimum scores of 153 Verbal and 144 Quantitative are desired. Official GRE scores should be sent to SOPHAS using code 0151.

Standardized tests considered in lieu of the GRE for the MPH-HPM include DAT, GMAT, LSAT, MCAT, OAT and PCAT.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Test Waivers:** Graduates with a terminal degree from a U.S. medical school, foreign-trained physicians who have obtained licensure to practice in the United States, and those with a PhD or with an excellent undergraduate record and 7 to 10 years or more of public health or healthcare professional experience may have the GRE requirement waived. To request a waiver or if you have other questions, contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an MPH program accredited by the Council on Education for Public Health (CEPH) may be transferred into the MPH. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The MPH program director approves the transfer of credits based on a review of course materials provided by the student. The maximum number of credits a student may transfer is 9.

**Clearances:** The MPH program requires students to complete fieldwork education. In the MPH program, it is the fieldwork site that determines the clearances, such as criminal background check and FBI fingerprinting, needed by a student. The results of these clearances determine whether a student may be onboarded at a respective site.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 42

*Required Courses:*

Code	Title	Credit Hours
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Health Policy and Management Courses</b>		
HPM 5014	Leadership and Management in Non-Profit Organizations	3
HPM 8008	Health Economics	3
HPM 8015	Public Health Policy and Legal Issues	3
<b>Electives<sup>1</sup></b>		<b>9</b>
Select three from the following:		
HIM 5101	Fundamentals of Health Informatics	
HIM 5102	Applications of Computer Programming in Health Informatics	
HIM 5106	Technology for Population Health	
HIM 5111	Technology for Healthcare Financial Management	
HIM 5129	Health Data Analysis	
HIM 5256	Global Health Informatics	
HIM 5299	Introduction to Language Processing and Text Mining for Health Professionals	
HPM 5007	Principles of Emergency Management	
HPM 5016	Public Health Advocacy	
HPM 5107	Forced Migration and Refugee Health	
HPM 5122	Healthcare Quality and Safety	
HPM 5131	Health Policy Analysis	
HPM 5132	Comparative Health Systems: Local, National, and Global Perspectives	
HPM 8013	Research Methods in Health Policy	
HPM 8014	Comparative Health Policy	
<b>MPH Fieldwork Experience</b>		
HPM 9289	MPH Fieldwork I	3
HPM 9389	MPH Fieldwork II	3
<b>Total Credit Hours</b>		<b>42</b>

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An alternate elective may be selected with the approval of the Program Director.

### On-Campus Full-Time MPH-HPM

Year 1		Credit Hours
Fall		
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
<b>Credit Hours</b>		<b>9</b>

Spring		Credit Hours
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
HPM 5014	Leadership and Management in Non-Profit Organizations	3
<b>Credit Hours</b>		<b>9</b>
Year 2		
Summer I		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
SBS 5002	Program Planning, Theory, and Practice	3
<b>Credit Hours</b>		<b>3</b>
Summer II		
Elective		3
<b>Credit Hours</b>		<b>3</b>
Fall		
HPM 8008	Health Economics	3
HPM 9289	MPH Fieldwork I	3
Elective		3
<b>Credit Hours</b>		<b>9</b>
Spring		
HPM 8015	Public Health Policy and Legal Issues	3
HPM 9389	MPH Fieldwork II	3
Elective		3
<b>Credit Hours</b>		<b>9</b>
<b>Total Credit Hours</b>		<b>42</b>

### Online Part-Time MPH-HPM

Year 1		Credit Hours
Fall		
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Credit Hours</b>		<b>6</b>
Spring		
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
<b>Credit Hours</b>		<b>6</b>
Summer		
HPM 8015	Public Health Policy and Legal Issues	3
Elective		3
<b>Credit Hours</b>		<b>6</b>
Year 2		
Fall		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
<b>Credit Hours</b>		<b>6</b>
Spring		
HPM 5014	Leadership and Management in Non-Profit Organizations	3
Elective		3
<b>Credit Hours</b>		<b>6</b>

<b>Summer</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Credit Hours</b>		<b>0</b>
<b>Year 3</b>		
<b>Fall</b>		
HPM 8008	Health Economics	3
HPM 9289	MPH Fieldwork I	3
<b>Credit Hours</b>		<b>6</b>
<b>Spring</b>		
HPM 9389	MPH Fieldwork II	3
Elective		3
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>42</b>

**Minimum Grade to be Earned for All Required Courses: B-**

#### **Culminating Events:**

##### *Fieldwork Practicum:*

Students are required to synthesize and integrate the knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice through an internship or practicum experience with a public health agency, health services organization, or under the supervision of a faculty preceptor. The MPH fieldwork experience serves as the applied practice experience as required by the Council on Education for Public Health (CEPH), the accrediting body for schools and programs of public health, for completion of the Master of Public Health degree. In addition, this applied practice experience provides the student with the opportunity to develop expertise in a topic area and to contribute original and independent observations to a body of knowledge.

##### *Evaluative Paper:*

For the applied practice experience to fulfill the requirements of HPM 9289 and HPM 9389, MPH in Health Policy and Management students are expected to complete a fieldwork experience. The required deliverable for the MPH fieldwork requirement is a final evaluative paper. Students must demonstrate their proficiency and the application of theory and principles in the paper.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/health-policy-and-management-mph-hp-hpam-mph>

### **Department Information:**

Department of Health Services Administration and Policy  
Ritter Hall Annex, 5th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-8726

### **Submission Address for Application Materials:**

<https://sophas.liaisoncas.com/>

## **Department Contacts:**

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Graduate Program Director:*

Sherief Ibrahim, JD, MPH  
Assistant Professor of Instruction  
sherief.ibrahim@temple.edu  
215-204-6728

#### *Chairperson:*

Huanmei Wu, PhD  
huanmei.wu@temple.edu  
215-204-8163

## **Neuromotor Science MS**

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Science in Neuromotor Science.

### **About the Program**

The study of human movement, both as an outcome of health and functioning and as a means to understand the mechanisms underlying neuromotor system integration and behavior, is foundational to many health professions. The skills needed to be successful in fields of related study require fluency across the disciplines of engineering, movement science, neuroscience and rehabilitation. The need exists for rigorously trained scientists with interdisciplinary training in neurobiology and biomechanics of the sensorimotor system, with a focus on how human movement is impacted by health conditions, disease, disability and development.

Our Neuromotor Science (NMS) program trains students to advance the science of neuromotor control and biomechanics of human posture and movement in individuals across the lifespan and spectrum of health and disability levels. The MS in Neuromotor Science (MS-NMS) program is designed for individuals in the fields of engineering, exercise science, kinesiology, occupational therapy, physical therapy, rehabilitation science and the like, preparing them to:

- advance the science and understanding of neuromotor processes, including assessment and evaluation of human movement, neuromotor function and integration, and how they are impacted by age, health, functioning and disability; and
- contribute to the development of interventions to improve human movement, particularly posture and locomotor control, and function across the lifespan.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main, Health Sciences Center

**Full-Time/Part-Time Status:** While full-time study is encouraged at the master's level, this research-focused degree program can be completed in 2 years with full-time study (9 credits per term) or 3 to 4 years if enrolled part-time.

MS-NMS students are initially advised by the NMS Program Director during admission and in the first term if an academic advisor has not been identified. Within two terms of matriculation, students are assigned

an academic advisor from the core program faculty or an available Graduate Faculty member with expertise in the student's cognate area, as approved by the NMS Program Director. Students develop an "Individualized Development Plan of Graduate Studies," which is reviewed with their advisor every term, and by the NMS Program Director and/or the Program Advisory Committee on an annual basis.

**Interdisciplinary Study:** Students may use their elective coursework to pursue interdisciplinary study throughout the University. The MS-NMS program participates in the interdisciplinary program in Neuroscience at Temple University.

**Areas of Specialization:** All students complete the same core course requirements, but may focus their elective coursework and research experiences on preparing them for future work in areas related to their specific interests.

**Job Prospects:** Graduates of the MS-NMS degree program are prepared for employment in clinical research, as faculty in professional programs, or in industry positions. In addition, the MS degree provides a strong foundation for students to continue their studies at the PhD level.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in up to three graduate courses with permission from the NMS Program Director.

**Financing Opportunities:** Assistantship packages consisting of a stipend, tuition remission, and subsidized health benefits are available. Admission to the MS-NMS program does not, however, guarantee financial support. Research and Teaching Assistantships are highly competitive, with awards varying based on faculty-funded areas of research and the teaching needs of the College. Please contact the NMS Program Director for additional information.

## Admission Requirements and Deadlines

### Application Deadline:

Fall: March 1  
Spring: November 1

All applicants to the MS in Neuromotor Science program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

### Letters of Reference:

Number Required: 3

*From Whom:* Letters of recommendation should be obtained from individuals who can speak to the applicant's potential for graduate study. At least one should be from a faculty member who is familiar with the applicant's academic abilities.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of a baccalaureate degree at Temple University.

A WES course-by-course transcript evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** In a one-page statement, articulate why you want to enroll in the MS-NMS program at Temple. State your career goals and research interests.

### Standardized Test Scores:

GRE: Scores from a test taken within the last 5 years must be at or above the 50th percentile in the verbal and quantitative components, with a score of 4 or higher on the writing component. Official scores should be sent directly to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Interview:** Students may be invited to interview with the program faculty. An interview may take place in person or through technology if cost prohibits travel to Temple.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
NMS 9621	Neuromotor Science 1: Neural Factors	3
NMS 9622	Neuromotor Science: Instrumentation	3
NMS 9623	Neuromotor Science: Programming	3
NMS 9624	Neuromotor Science 2: Mechanics and Models	3
NMS 9627	Neuromotor Science 3: Cognition and Learning	3
	Statistics and Research Design Course	3
	<b>Electives <sup>1</sup></b>	<b>9</b>
	<b>Research Experience</b>	

NMS 9654	Neuromotor Science: Laboratory Rotation and Seminar	3
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<b>Total Credit Hours</b>		<b>30</b>
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This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Electives are chosen from existing 5000-, 8000-, or higher-level courses to provide a cognate area based on the student's interest in, for example, engineering, kinesiology, neuroscience, psychology, public health, rehabilitation science, or teaching in higher education. *Not all courses listed in the course descriptions for this program are available to MS-NMS students.* The NMS Program Director and faculty advise on and approve the selection of electives.

**Minimum Grade to be Earned for All Required Courses:** B-

**Culminating Event:** Successful completion of coursework constitutes the culminating event for the Neuromotor Science MS.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/neuromotor-science-ms-hp-nms-ms>

### Department Information:

Dept. of Health and Rehabilitation Sciences  
Ritter Hall Annex, 6th Floor  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
deptpt@temple.edu  
215-204-9066

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

*Program Director:*

W. Geoffrey Wright, PhD  
wrightw@temple.edu  
215-204-9008

*Chairperson:*

Janet Prvu Bettger, ScD MS FAHA  
Professor  
janet.bettger@temple.edu

## Neuromotor Science PhD

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Philosophy in Neuromotor Science.

## About the Program

The study of human movement, both as an outcome of health and functioning and as a means to understand the mechanisms underlying neuromotor system integration and behavior, is foundational to many health professions. The skills needed to be successful in fields of related study require fluency across the disciplines of engineering, movement science, neuroscience and rehabilitation. The need exists for rigorously trained scientists with interdisciplinary training in neurobiology and biomechanics of the sensorimotor system, with a focus on how human movement is impacted by health conditions, disease, disability and development.

Our Neuromotor Science (NMS) program trains students to advance the science of neuromotor control and biomechanics of human posture and movement in individuals across the lifespan and spectrum of health and disability levels. The PhD in Neuromotor Science (PhD-NMS) program is designed for individuals in the fields of engineering, exercise science, kinesiology, occupational therapy, physical therapy, rehabilitation science and the like, preparing them to:

- advance the science and understanding of neuromotor processes, including assessment and evaluation of human movement, neuromotor function and integration, and how they are impacted by age, health, functioning and disability; and
- contribute to the development of interventions to improve human movement, particularly posture and locomotor control, and function across the lifespan.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main, Health Sciences Center

**Full-Time/Part-Time Status:** Full-time study is expected. This research-focused doctoral degree program requires 4 to 7 years of full-time study post-baccalaureate or 2 to 3 years of full-time study after completion of the MS in Neuromotor Science degree.

PhD-NMS students are initially advised by the NMS Program Director during admission and in the first term if an academic advisor has not been identified. Within two terms of matriculation, students are assigned an academic advisor from the core program faculty or an available Graduate Faculty member with expertise in the student's cognate area, as approved by the NMS Program Director. Students develop an "Individualized Development Plan of Graduate Studies," which is reviewed with their advisor every term, and by the NMS Program Director and/or the Program Advisory Committee on an annual basis.

**Interdisciplinary Study:** Students may use their elective coursework to pursue interdisciplinary study throughout the University. The PhD-NMS program participates in the interdisciplinary program in Neuroscience at Temple University.

**Areas of Specialization:** All students complete the same core course requirements, but may focus their elective coursework and research experiences on preparing them for future work in areas related to their specific interests.

**Job Prospects:** Graduates of the PhD-NMS degree program are prepared for research or teaching/research positions at Carnegie Research I institutions. They are also prepared for employment as faculty members in other academic settings, in clinical research settings, or in industry positions.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in up to three graduate courses with permission from the NMS Program Director.

**Financing Opportunities:** Assistantship packages consisting of a stipend, tuition remission, and subsidized health benefits are available. Admission to the PhD-NMS program does not, however, guarantee financial support. Research and Teaching Assistantships are highly competitive, with awards varying based on faculty-funded areas of research and the teaching needs of the College. Please contact the NMS Program Director for additional information.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 5

*Spring:* November 1

All applicants to the PhD in Neuromotor Science program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liasoncas.com/>. Applications received after the stated deadlines will be reviewed as space and funding allow.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from individuals who can speak to the applicant's potential for graduate study. At least one should be from a faculty member who is familiar with the applicant's academic abilities.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of a baccalaureate degree at Temple University.

A WES course-by-course transcript evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** In a one-page statement, articulate why you want to enroll in the PhD-NMS program at Temple. State your career goals and research interests.

### Standardized Test Scores:

GRE: Required. Scores from a test taken within the last 5 years must be at or above the 50th percentile in the verbal and quantitative components, with a score of 4 or higher on the writing component. Official scores should be sent directly to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5

- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Interview:** Students may be invited to interview with the program faculty. An interview may take place in person or through technology if cost prohibits travel to Temple.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 45

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
HRPR 5999	Research Experience in Health Professions (work on publishable paper for two terms)	0
NMS 9621	Neuromotor Science 1: Neural Factors	3
NMS 9622	Neuromotor Science: Instrumentation	3
NMS 9623	Neuromotor Science: Programming	3
NMS 9624	Neuromotor Science 2: Mechanics and Models	3
NMS 9627	Neuromotor Science 3: Cognition and Learning	3
NMS 9653	Grantsmanship	3
Statistics and Research Design courses		9
Teaching Practicum <sup>2</sup>		0
<b>Electives<sup>3</sup></b>		<b>12</b>
<b>Research Courses</b>		
NMS 9994	Doctoral Preliminary Exams	1
NMS 9998	Dissertation Proposal	2
NMS 9999	Dissertation Research	3
<b>Total Credit Hours</b>		<b>45</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.



2

Each student serves as a Teaching Assistant for one academic term during the degree program. Students who select the Teaching in Higher Education Seminar as one of the required electives can then use the Teaching Practicum to complete the Teaching in Higher Education certificate.

3

Electives are chosen from existing 5000-, 8000-, or higher-level courses to provide a cognate area based on the student's interest in, for example, engineering, kinesiology, neuroscience, psychology, public health, rehabilitation science, or teaching in higher education. The NMS Program Director and faculty advise on and approve the selection of electives.

**Minimum Grade to be Earned for All Required Courses: B-**

**Culminating Events:**

In addition to completing the required coursework, students are expected to complete an area paper, a preliminary written and oral examination, and a dissertation research proposal prepared in the form of a grant proposal. Students are also expected to write and submit an abstract for their research and present that research at a scientific or professional meeting. The dissertation must include a publishable article.

*Area Paper:*

Prior to the preliminary examination, students must write a paper of publishable quality in their chosen area. Students could enroll in an elective course, a laboratory rotation, or independent study to complete this paper. The paper can be a report of research completed with a faculty member, a systematic review of literature related to the projected area of dissertation work, or a representation of theoretical work. In each instance, the student is expected to be the lead or sole author. Students are encouraged to select and submit the paper for peer review to an appropriate journal, but the publishable quality of the paper will be determined by faculty members with sufficient background in the area to judge the quality of the work. Students who have published a peer-reviewed paper in a journal as lead author prior to entry into the doctoral program can request a waiver of this requirement.

*Preliminary Examination:*

All students must pass a preliminary examination (NMS 9994) prior to defending their dissertation research proposal. This qualifying examination consists of assessment of both didactic knowledge and research skills in neuromotor science. The didactic knowledge portion of the exam consists of a written examination followed by an oral examination of core concepts taught within the core neuromotor science courses. The research skill portion of the exam consists of skills acquired in a research lab presented in a lab practicum format.

*Dissertation Proposal and Defense:*

In conjunction with the academic advisor and with the approval of the NMS Program Director, each student is expected to identify a Doctoral Advisory Committee. The committee shall be comprised of at least three members. Two of the members shall be from within the Department of Health and Rehabilitation Sciences, and at least one shall be from outside the department. At least two of the three members must hold full Graduate Faculty status.

Students are required to prepare and submit a dissertation proposal and successfully defend it orally in front of their committee. As appropriate, they must obtain Institutional Review Board (IRB) approval for their proposed research and submit a copy of the dissertation proposal to the Graduate School. Students are expected to have developed and

defended their dissertation proposal within one year of successfully completing their preliminary examination.

Any student who does not adhere to this timeline must petition the Program Advisory Committee for an exception to this requirement. Extensions are not guaranteed. The case of any student who did not receive an extension will be considered at the time of the Annual Review of Progress toward the degree. Failure to pass NMS 9998 within one year can result in dismissal from the program.

*Dissertation Research:*

Students are required to complete and orally defend their dissertation research. Students must be enrolled continuously in NMS 9999 until their dissertation is successfully defended. The Graduate School requires at least 6 credits of dissertation research coursework. Students must be enrolled in the term that they graduate.

The dissertation must be successfully defended in a public oral defense as determined by the student's Dissertation Examining Committee. This committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Dissertation Examining Committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

Students who are preparing to defend their dissertation must confirm a time and date for the oral defense with their Dissertation Examining Committee at least 15 days before the desired defense date. After the student and department have arranged the time, date and room for the defense, the student must provide the official announcement to the Graduate School at least two weeks before the defense.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/neuromotor-science-phd-hp-nms-phd>

### Department Information:

Dept. of Health and Rehabilitation Sciences  
Ritter Hall Annex, 6th Floor  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6091  
deptpt@temple.edu  
215-204-9066

### Submission Address for Application Materials:

<https://sophas.liasoncas.com/>

### Department Contacts:

*Program Director:*

W. Geoffrey Wright, PhD  
wrightw@temple.edu  
215-204-9008

*Chairperson:*

Janet Prvu Bettger, ScD MS FAHA  
Professor  
janet.bettger@temple.edu

# Nursing DNP

## COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Nursing Practice.

## About the Program

Graduate nursing education strongly reflects the values and goals of nursing and the broad mission of Temple University. The DNP program prepares graduates to provide primary care for individuals, families and communities grounded in evidence-based practice and research. Embedded in the program is the social context of health systems, health policy, and health economics and their impact on the individual, family and community. Students are prepared to provide direct primary care to individuals across diverse settings and indirect administration of systems of care, as well as to participate in the development and implementation of health policy. The DNP program expands students' scope of practice while maintaining a clinical primary care focus. Through integration of the educator, clinician and research roles, faculty work with DNP students to cultivate the value of evidence-based clinical practice and its potential impact on individuals, groups and communities.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Health Sciences Center

**Full-Time/Part-Time Status:** Both full-time and part-time schedules are available to DNP students. Classes may be offered between 8:00 a.m. and 9:30 p.m. on Wednesdays and other evenings throughout the year. Summer courses are included as a part of the curriculum.

**Accreditation:** The Doctor of Nursing Practice degree at Temple University is accredited by the Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530, Washington, DC 20036, 202-887-6791.

**Areas of Specialization:** Three concentrations are offered:

- Adult-Gerontology Primary Care Nurse Practitioner (AGPCNP), which can be completed in 3-4 years.
- Family and Individual Across the Lifespan Nurse Practitioner (FNP), which can be completed in 3-4 years.
- Health Systems Leadership (HSL), which can be completed in 2 years. It is designed specifically as a post-master's program for nurses who hold a master's degree and desire knowledge and advancement in the business and administrative ranks of a health system.

**Job Prospects:** Graduates of the program are employed in a variety of advanced practice nursing positions.

**Licensure/Certification:** Professional Nurse Licensure (RN) is required in Pennsylvania and either New Jersey or Delaware for both post-BSN and post-master's applicants. Additional licenses may be obtained in states in which clinical work is to be done. For more information about licensure, see <https://www.ncsbn.org/contact-bon.htm>.

Nurse practitioner graduates of the AGPCNP and FNP concentrations are suited to sit for national board certifications with the American Nurses Credentialing Center (AANC) and the American Academy of Nurse Practitioners (AANP). The HSL concentration does not lead to national

licensure nor certification. The DNP program remains in compliance with the Pennsylvania State Board of Nursing.

**Non-Matriculated Student Policy:** Non-matriculated students can take a total of 9 graduate credits prior to matriculation. Only the following courses may be taken while a non-matriculated student:

Code	Title	Credit Hours
EPBI 5001	Biostatistics for Health Professions	3
NURS 5103		
NURS 5105		

**Financing Opportunities:** Funds are available to matriculated students. Students are required to complete a FAFSA application annually to be eligible for funding.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* April 15

All applicants to the DNP in Nursing program must apply via the Centralized Application Service for Nursing Programs (NursingCAS). The system can be accessed at <https://www.nursingcas.org/>.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should assess the applicant's ability to work independently, academic and scholarly performance, analytical thinking and aptitude for advanced study, commitment to urban health, communication skills, and professional contributions. Authors should be supervisors or academics and indicate how long they have known the applicant and in what capacity.

**Coursework Required for Admission Consideration:** Two admission options are offered for the DNP program:

- Direct entry from the BSN – Post-baccalaureate applicants choose between two concentrations: Adult-Gerontology Primary Care Nurse Practitioner (AGPCNP) and Family and Individual Across the Lifespan Nurse Practitioner (FNP). Candidates who apply for post-BSN entry must have earned a baccalaureate degree in Nursing. All transcripts of applicants will be reviewed by the graduate faculty. Offers of acceptance will be made based on their recommendations. The program reserves the right to request that an applicant take the GRE exam based on a review of the transcript.
- Post-Master's – Applicants to the post-master's DNP program may elect to pursue a concentration in AGPCNP, in FNP, or in Health Systems Leadership (HSL). All applicants must have an earned master's in Nursing and are required to complete a total of 1,000 clinical practicum hours. Students may apply up to 500 hours earned during their master's program toward the 1,000-hours requirement. Hours required for national certification may also be applied. Prior to an applicant's formal admission to the program, clinical practicum hours must be evaluated and verified via a gap analysis process.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of a baccalaureate degree at Temple University. Official transcripts for all undergraduate and graduate institutions attended must be submitted.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through NursingCAS.

**Statement of Goals:** In a 500- to 1,000-word statement of purpose, describe your background, academic and professional goals, and how your interests relate to the DNP program at Temple.

**Standardized Test Scores:**

GRE/MAT: Optional, although applicants who believe GRE scores would complement their application are encouraged to submit scores directly to NursingCAS using code 4033. If submitted, scores are expected to be at or above the 50th percentile.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to NursingCAS using the NursingCAS-specific TOEFL code B506)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current professional resume required.

**Interview:** An interview conducted by the Nursing Graduate Faculty is scheduled when all required materials have been submitted by the applicant.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** With departmental approval, DNP students may satisfy a maximum of 20% of their coursework requirement through transfer credit. This equates to 9 credits, external to Temple University's Department of Nursing, for a post-baccalaureate DNP applicant and 6 credits, external to Temple University's Department of Nursing, for a post-master's DNP applicant. A transferred course must be equivalent to coursework offered at Temple, and the grade must be a "B" or better to transfer. The decision is made by the Director of Graduate Programs in conjunction with the appropriate faculty member and forwarded to the Associate Dean for Academic Affairs for final approval. Students must provide the syllabus for the course(s) being considered for transfer credits.

**Clearances:** The Nursing DNP program requires students to complete clinical/field education experiences at facilities both on and off Temple University's campuses. Placements require a Pennsylvania state

criminal background check, Pennsylvania state child abuse clearance, FBI fingerprinting clearance, and a drug screen. Negative results may limit or eliminate placement options for the student, resulting in their inability to meet admission/graduation requirements. Conviction of a misdemeanor, felony, or felonious or illegal act may prevent an individual from becoming licensed and/or obtaining Advanced Practice Nursing approval. Students need a physical examination, proof of required immunizations, Quantiferon testing, CPR certification and personal health insurance. Students who do not comply with the required health and immunization requirements will not be permitted to attend clinical and may be dismissed from the Nursing program.

**Other:** Copies of the applicant's current nursing licenses must be provided with the application. Note that students who hold advanced practice licenses must maintain licensure throughout enrollment in the DNP program.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required to Earn the Degree: 77*, including 43 required credits and 34 practicum credits for the Adult-Gerontology Primary Care Nurse Practitioner (AGPCNP) and for the Family and Individual Across the Lifespan Nurse Practitioner (FNP) concentrations; 49-55, including 41 required credits and 8-14 practicum credits for the Health Systems Leadership (HSL) concentration

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EPBI 5001	Biostatistics for Health Professions	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
HRPR 8984		1
NURS 5101	Translation of Evidence in Healthcare	3
NURS 5102		3
NURS 5103		3
NURS 5104	<sup>1</sup>	2
NURS 5105		3
NURS 5106		2
NURS 5107		3
NURS 5108	<sup>2</sup>	3
NURS 5109	<sup>2</sup>	3
NURS 5201		4
NURS 5202	<sup>2</sup>	3
NURS 5401	Advanced Physiology and Pathophysiology <sup>1</sup>	4
NURS 5402	Advanced Pharmacotherapeutics <sup>1</sup>	4
NURS 5552	Advanced Health Assessment and Clinical Reasoning <sup>1</sup>	4
<b>DNP Capstone Courses</b>		
NURS 8101	DNP Project Development I <sup>3</sup>	1
NURS 8102	DNP Project Development II <sup>3</sup>	1
NURS 8103	DNP Project Implementation <sup>4</sup>	2

1

Course is taken only by students in the Adult-Gerontology Primary Care Nurse Practitioner Concentration (AGPCNP) and the Family and Individual Across the Lifespan Nurse Practitioner Concentration (FNP) concentration.

2

Course is taken only by students in the Health Systems Leadership Concentration (HSL) concentration.

3

Course is taken by students in the Health Systems Leadership Concentration (HSL) concentration for 2 credits.

4

Course is taken by students in the Health Systems Leadership Concentration (HSL) concentration for 3 credits.

Additional course requirements for each of the three concentrations are identified in the following course grids:

### Practicum Courses for the Adult-Gerontology Primary Care Nurse Practitioner Concentration (AGPCNP)

Code	Title	Credit Hours
<b>Practica Sequence</b>		
NURS 9378		3
NURS 9385		5
NURS 9478		4
NURS 9485		5
NURS 9578		4
NURS 9585		5
<b>Final Practica</b>		
NURS 9678		3
NURS 9685		5
<b>Total Credit Hours</b>		<b>34</b>

### Practicum Courses for the Family and Individual Across the Lifespan Nurse Practitioner Concentration (FNP)

Code	Title	Credit Hours
<b>Practica Sequence</b>		
NURS 9378		3
NURS 9385		5
NURS 9478		4
NURS 9485		5
NURS 9578		4
NURS 9585		5
<b>Final Practica</b>		
NURS 9778		3
NURS 9785		5
<b>Total Credit Hours</b>		<b>34</b>

### Practicum Courses for the Health Systems Leadership Concentration (HSL) <sup>1</sup>

Code	Title	Credit Hours
NURS 9389	DNP I Practicum	4-7
NURS 9489	DNP II Practicum	4-7
<b>Total Credit Hours</b>		<b>8-14</b>

1

The number of credits required for each practicum is determined by a gap analysis.

The following course grids offer proposed plans for full-time study for each of the three concentrations:

### Full-Time Plan of Study for Adult-Gerontology Primary Care Nurse Practitioner (AGPCNP) Concentration <sup>1</sup>

Year 1		
Fall		Credit Hours
EPBI 5001	Biostatistics for Health Professions	3
HRPR 8984		1
NURS 5101	Translation of Evidence in Healthcare	3
NURS 5401	Advanced Physiology and Pathophysiology	4
<b>Credit Hours</b>		<b>11</b>
Spring		
NURS 5102		3
NURS 5103		3
NURS 5402	Advanced Pharmacotherapeutics	4
<b>Credit Hours</b>		<b>10</b>
Summer		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
NURS 5105		3
NURS 5107		3
NURS 5552	Advanced Health Assessment and Clinical Reasoning	4
<b>Credit Hours</b>		<b>10</b>
Year 2		
Fall		Credit Hours
NURS 5104		2
NURS 9378		3
NURS 9385		5
<b>Credit Hours</b>		<b>10</b>
Spring		
NURS 5106		2
NURS 9478		4
NURS 9485		5
<b>Credit Hours</b>		<b>11</b>
Summer		
NURS 5201		4
<b>Credit Hours</b>		<b>4</b>

Year 3		
<b>Fall</b>		
NURS 8101	DNP Project Development I	1
NURS 9578		4
NURS 9585		5
<b>Credit Hours</b>		<b>10</b>
<b>Spring</b>		
NURS 8102	DNP Project Development II	1
NURS 8103	DNP Project Implementation	2
NURS 9678		3
NURS 9685		5
<b>Credit Hours</b>		<b>11</b>
<b>Total Credit Hours</b>		<b>77</b>

1

Plans of study for part-time enrollment and for those pursuing the DNP post-master's are available from the Program Director.

### Full-Time Plan of Study for Family and Individual Across the Lifespan Nurse Practitioner (FNP) Concentration <sup>1</sup>

Year 1		
<b>Fall</b>		
EPBI 5001	Biostatistics for Health Professions	3
HRPR 8984		1
NURS 5101	Translation of Evidence in Healthcare	3
NURS 5401	Advanced Physiology and Pathophysiology	4
<b>Credit Hours</b>		<b>11</b>
<b>Spring</b>		
NURS 5102		3
NURS 5103		3
NURS 5402	Advanced Pharmacotherapeutics	4
<b>Credit Hours</b>		<b>10</b>
<b>Summer</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
NURS 5105		3
NURS 5107		3
NURS 5552	Advanced Health Assessment and Clinical Reasoning	4
<b>Credit Hours</b>		<b>10</b>
<b>Year 2</b>		
<b>Fall</b>		
NURS 5104		2
NURS 9378		3
NURS 9385		5
<b>Credit Hours</b>		<b>10</b>
<b>Spring</b>		
NURS 5106		2
NURS 9478		4
NURS 9485		5
<b>Credit Hours</b>		<b>11</b>

Summer		
NURS 5201		4
<b>Credit Hours</b>		<b>4</b>
<b>Year 3</b>		
<b>Fall</b>		
NURS 8101	DNP Project Development I	1
NURS 9578		4
NURS 9585		5
<b>Credit Hours</b>		<b>10</b>
<b>Spring</b>		
NURS 8102	DNP Project Development II	1
NURS 8103	DNP Project Implementation	2
NURS 9778		3
NURS 9785		5
<b>Credit Hours</b>		<b>11</b>
<b>Total Credit Hours</b>		<b>77</b>

1

Plans of study for part-time enrollment and for those pursuing the DNP post-master's are available from the Program Director.

### Full-Time Plan of Study for Health Systems Leadership (HSL) Concentration <sup>1</sup>

Year 1		
<b>Fall</b>		
EPBI 5001	Biostatistics for Health Professions	3
HRPR 8984		1
NURS 5101	Translation of Evidence in Healthcare	3
<b>Credit Hours</b>		<b>7</b>
<b>Spring</b>		
NURS 5102		3
NURS 5103		3
<b>Credit Hours</b>		<b>6</b>
<b>Summer</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
NURS 5105		3
NURS 5107		3
<b>Credit Hours</b>		<b>6</b>
<b>Year 2</b>		
<b>Fall</b>		
NURS 5108		3
NURS 5109		3
<b>Credit Hours</b>		<b>6</b>
<b>Spring</b>		
NURS 5106		2
NURS 5202		3
<b>Credit Hours</b>		<b>5</b>
<b>Summer</b>		
NURS 5201		4
NURS 8101	DNP Project Development I	2
<b>Credit Hours</b>		<b>6</b>

Year 3		
<b>Fall</b>		
NURS 8102	DNP Project Development II	2
NURS 9389	DNP I Practicum <sup>2</sup>	4-7
<b>Credit Hours</b>		<b>6-9</b>
<b>Spring</b>		
NURS 8103	DNP Project Implementation	3
NURS 9489	DNP II Practicum <sup>2</sup>	4-7
<b>Credit Hours</b>		<b>7-10</b>
<b>Total Credit Hours</b>		<b>49-55</b>

1

A plan of study for part-time enrollment is available from the Program Director.

2

The number of credits required for each practicum is determined by a gap analysis of previous clinical hours completed.

**Minimum Grade to be Earned for All Required Courses: B-**

#### **Culminating Event:**

*Clinical Practice Project:*

Over the course of completing NURS 8101 DNP Project Development I, NURS 8102 DNP Project Development II, and NURS 8103 DNP Project Implementation, the student develops an evidence-based clinical practice project in consultation with a committee composed of faculty and site mentor.

## Contacts

### Department Web Address:

<https://www.temple.edu/academics/degree-programs/nursing-dnp-hp-nurs-dnp>

### Department Information:

Dept. of Nursing, Graduate Education  
College of Public Health  
3307 N. Broad Street, 505 Jones Hall  
Philadelphia, PA 19140  
TUnurse@temple.edu  
215-707-4686

### Submission Address for Application Materials:

<https://www.nursingcas.org/>

### Department Contacts:

*Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*DNP Program Director:*

Beth Heuer, DNP, CRNP, CPNP-PC, PMHS, FAANP  
Associate Professor of Clinical Instruction  
beth.heuer@temple.edu

*Chairperson:*

Amita Avadhani, PhD, DNP, NEA-BC, CNE, DCC, ACNP-BC, AGNP-C, CCRN, FAANP, FCCM

Professor

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215-707-4622

## Nutrition MPH

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Public Health in Nutrition.

### About the Program

The Master of Public Health in Nutrition, offered by the Department of Kinesiology, is a terminal professional dietetics degree. The program prepares future public health dietitians to identify and assess population needs; plan, implement and evaluate programs to address those needs; and ensure the needs of diverse populations are met to improve their overall health status, particularly their nutritional/dietary needs. The MPH in Nutrition program has a strong focus on addressing the environmental, social and cultural factors related to individual and population nutrition and associated health disparities over the life course. Our graduates will serve individuals and communities promoting and sustaining healthy lives.

The MPH in Nutrition is a full-time, two-year on-campus program. While some courses may be offered online or in hybrid formats, most of the coursework is delivered in person over 16-week academic terms. Throughout the program of study, students engage in guaranteed placements at our clinical, foodservice and public health supervised experiential learning sites.

For more information about the on-campus MPH in Nutrition program, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main, with some instruction online

**Full-Time/Part-Time Status:** Full-time study is required.

**Affiliation(s):** The MPH in Nutrition maintains dozens of affiliation agreements with community partners in clinical, foodservice and public health nutrition. The program has long-standing research and fieldwork affiliations with The Food Trust; Fox Chase Cancer Center; Health Federation of Philadelphia; NORTH, INC.; Philadelphia Department of Public Health; School District of Philadelphia; and many other community health agencies. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

The MPH in Nutrition program director and clinical coordinator assist students in finding appropriate placements throughout the Greater Philadelphia region.

**Accreditation:** The MPH in Nutrition program is fully accredited by the Council on Education for Public Health (CEPH) and the Accreditation Council for Education in Nutrition and Dietetics (ACEND). Achieving accreditation in 1985, Temple's MPH program is a well-established accredited MPH program in community health.

**Areas of Specialization:** The MPH degree program is offered in six specialty fields of study:

- Applied Biostatistics (APBIO)
- Environmental Health (EH)
- Epidemiology (EPI)
- Health Policy and Management (HPM)
- Nutrition (NUTR)
- Social and Behavioral Sciences (SBS)

**Job Prospects:** Graduates with an MPH in Nutrition degree have a multitude of job options working in clinical, foodservice or public health nutrition settings. Clinical dietitians work with other health professionals treating individuals in hospitals and outpatient clinics. Foodservice dietitians work in hospitals, school foodservice, restaurants and food stores, such as supermarkets and convenience stores, selling fresh food and overseeing the large-scale production of food. Public health dietitians work in a wide range of nutrition settings, including emergency food, food delivery, nutrition education and school foods programs. Additionally, as an MPH graduate, students have a variety of job opportunities open to them within the whole of public health.

**Licensure/Certification:** Graduates are eligible to take the exam offered by the Commission on Dietetic Registration to become a Registered Dietitian Nutritionist (RDN). Students who complete the MPH in Nutrition at Temple University may also be eligible to sit for the Certified in Public Health (CPH) exam offered by the National Board of Public Health Examiners and the Certified Health Education Specialist (CHES®) exam offered by the National Commission for Health Education Credentialing, Inc. (NCHEC). For more information about credentialing in public health, visit <https://www.nchec.org/>.

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the course instructor. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program. Exceptions to this policy relate to formal certificate programs.

**Financing Opportunities:** Limited Teaching and Research Assistantships are available in the College of Public Health and are assigned on a competitive basis among students who academically excel. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to the application deadline are eligible for a Teaching Assistant (TA) position. TAs are required to work 20 hours per week in any combination of teaching assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs, and the Graduate School. To be considered for a Teaching or Research Assistantship, students must complete an application form that is sent to them upon admission to the MPH program.

The College of Public Health awards a limited number of partial scholarships on a competitive basis to students with an outstanding academic record. No separate application is needed for these awards as outstanding applicants are automatically considered following submission of their application. Other available scholarships are listed at <https://cph.temple.edu/admissions/scholarships>. Students may also be eligible

for financial support through the Office of Student Financial Services. For more information on assistantships, scholarships and financial aid, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

All applicants to the MPH program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Deposit Deadline for Admitted Applicants:

*Fall:* Within 3 weeks of receiving admissions decision

Applicants who are accepted to the program must pay a \$500 deposit to secure their enrollment in the MPH in Nutrition program. For questions about the deposit and payment process or to request an extension, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with the applicant's academic background and achievements. Applicants who have been out of school for an extended period of time should ensure that letters are provided by supervising employers or professional colleagues who can discuss their relevant academic skills, including critical thinking, research and writing.

**Coursework Required for Admission Consideration:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social sciences and writing. Applicants who completed prior graduate coursework or earned a graduate degree are expected to submit documentation for consideration in the application review process.

To be eligible for acceptance into the MPH in Nutrition program, applicants are required to have completed:

- Anatomy and Physiology (3 credits)
- Biochemistry (3 credits)
- Biology (6 credits)
- Chemistry (6 credits)
- Organic Chemistry (3 credits)
- At least one introductory Nutrition course (3 credits)

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0.

**Statement of Goals:** As part of your application, address the following questions in 1,000 words or less:

- Why are you pursuing admission to the MPH in Nutrition program?
- What are your particular areas of interest in public health nutrition?
- What academic or professional experiences demonstrate your commitment to public health nutrition?
- What exceptional circumstances related to your previous academic performance would you like the Admissions Committee to note?

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an MPH program accredited by CEPH may be transferred into the MPH in Nutrition program. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The Director of Graduate Studies approves the transfer of credits based on a review of course materials provided by the student. The maximum number of credits a student may transfer is 9.

**Clearances:** The MPH in Nutrition program requires students to complete fieldwork education. As part of the MPH program, the fieldwork sites determine students' required clearances, including criminal background check and FBI fingerprinting. The results of these clearances determine whether a student may be onboarded at a respective site.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 48

*Required Courses:*

Code	Title	Credit Hours
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Nutrition Courses</b>		
NUTR 5015	Nutrition Education and Counseling	3
NUTR 5035	Nutritional Biochemistry	3
NUTR 5087	Food Preparation and Management I	1.5
NUTR 5387	Dietetics Experiential Learning	3
NUTR 5525	Food Preparation and Management II	1.5
NUTR 5535	Medical Nutrition Therapy	3
NUTR 5815	Cultural and Community Nutrition	3
NUTR 5835	Nutrition Through the Lifecycle	3
SBS 5015	Public Health Nutrition	3
<b>MPH Fieldwork Experience</b>		
NUTR 9289	MPH Fieldwork I	3
NUTR 9389	MPH Fieldwork II	3
<b>Total Credit Hours</b>		<b>48</b>

## Proposed Plan of Study Outlined by Year and Term

Year 1		Credit Hours
Fall		
EPBI 5101	Fundamentals of Epidemiology	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
NUTR 5035	Nutritional Biochemistry	3
SBS 5001	Fundamentals of Public Health	3
<b>Credit Hours</b>		<b>9</b>
Spring		Credit Hours
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
NUTR 5015	Nutrition Education and Counseling	3
NUTR 5087	Food Preparation and Management I	1.5
SBS 5015	Public Health Nutrition	3
<b>Credit Hours</b>		<b>12</b>
Year 2		Credit Hours
Summer I		
HPM 5006	Political and Economic Aspects of Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Credit Hours</b>		<b>6</b>
Summer II		Credit Hours
NUTR 9289	MPH Fieldwork I	3
<b>Credit Hours</b>		<b>3</b>



Fall		
ENVH 5004	Environmental Health	1.5
NUTR 5525	Food Preparation and Management II	1.5
NUTR 5535	Medical Nutrition Therapy	3
NUTR 9389	MPH Fieldwork II	3
<b>Credit Hours</b>		<b>9</b>
Spring		
NUTR 5387	Dietetics Experiential Learning	3
NUTR 5815	Cultural and Community Nutrition	3
NUTR 5835	Nutrition Through the Lifecycle	3
<b>Credit Hours</b>		<b>9</b>
<b>Total Credit Hours</b>		<b>48</b>

**Minimum Grade to be Earned for All Required Courses: B-**

#### Culminating Events:

##### *Supervised Experiential Learning:*

Students have the opportunity to synthesize and integrate the knowledge and skills acquired in coursework through Supervised Experiential Learning (SEL) that includes 280 hours in clinical, 140 hours in foodservice and 500 hours in public health settings. SEL counts toward the hours required by ACEND and CEPH, the accrediting bodies for dietetics and public health.

During the clinical and foodservice SEL, students develop skills and judgment needed by practicing RDNs. During the public health SEL, students have a rich public health experience, taking a deep dive into the population needs and assets, community context, and environmental influences. The public health SEL provides students with the opportunity to develop expertise in a specific area of public health nutrition and to contribute to the public health nutrition body of knowledge.

##### *Evaluative Paper:*

As part of the public health SEL, students work with their preceptor and instructor for Fieldwork I and II (SBS 9289 and SBS 9389) to develop a nutrition intervention or program evaluation. This is an exciting opportunity to build on existing knowledge, develop unique public health nutrition skills, and practice as a public health nutritionist.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/nutrition-mp-hp-nutr-mp-h>

### Department Information:

Dept. of Kinesiology  
230 Pearson Hall  
1800 N. Broad Street  
Philadelphia, PA 19121-3302  
publichealth@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

*Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*Field Placement Coordinator:*  
Alissa Smethers  
alissa.smethers@temple.edu

*Graduate Program Director:*  
Elizabeth Tenison, PhD, RDN  
tuq72394@temple.edu

*Chairperson:*  
Mark Stoutenberg, PhD, MSPH  
237 Pearson Hall  
mark.stoutenberg@temple.edu  
215-204-2158

## Occupational Therapy OTD

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctorate of Occupational Therapy.

### About the Program

The Doctorate of Occupational Therapy (OTD) is an entry-level professional doctorate in occupational therapy. Students entering the OTD program must hold a bachelor's degree prior to the start of the program. As decreed by the American Occupational Therapy Association (AOTA), occupational therapists may enter the profession at the master's or doctoral level. Although a doctoral degree is not mandatory, it is believed that the profession will eventually move to the single point of entry doctorate degree as many healthcare disciplines have done. This program is forward thinking, preparing students now at the doctoral level.

**Time Limit for Degree Completion:** 3 years, with coursework completed lockstep in 10 semesters as part of a cohort

**Campus Location:** Main for in-person instruction, with the majority of learning/instruction online. Experiential-learning labs and fieldwork are done at off-campus clinical and community sites.

**Full-Time/Part-Time Status:** The degree program must be completed on a full-time basis.

**Affiliation(s):** Students complete field studies and capstones in various settings depending on the nature of the study.

**Ranking:** In 2020, according to *U.S. News & World Report*, Temple University's program ranks as the 23rd best occupational therapy program out of 198.

**Accreditation:** The entry-level occupational therapy doctoral degree program has applied for accreditation and has been granted Candidacy Status by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. ACOTE's telephone number is 301-652-AOTA, and its web address is <https://acoteonline.org>.

The program must have a pre-accreditation review, complete an on-site evaluation, and be granted Accreditation Status before its graduates will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification

in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, all states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

Students must complete 24 weeks of Level II fieldwork as well as an individual 14-week capstone experience within 18 months following completion of the didactic portion of the program. The doctoral capstone experience must be started after completion of all coursework and Level II fieldwork as well as completion of preparatory activities defined in 2018 ACOTE OTD Standard D.1.3.

**Job Prospects:** As of 2020, the U.S. Bureau of Labor Statistics projects a 17% growth in occupational therapy until 2030. This is more than double the 8% growth projected for all jobs.

**Licensure/Certification:** Graduates of the OTD program are eligible to take the National Board for Certification in Occupational Therapy (NBCOT) examination leading to the designation of Occupational Therapist, Registered (OTR). Additionally, practitioners must abide by specific licensure requirements as determined by individual states. For more information about state licensure, visit the AOTA state licensure webpage.

**Non-Matriculated Student Policy:** OTD coursework is available only to matriculated students.

**Financing Opportunities:** Financial aid is available to students. For information on financial aid, please contact Student Financial Services at 215-707-2667.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer II:* February 1

All applicants to the OTD program must apply via the Occupational Therapist Centralized Application Service (OTCAS). The system can be accessed at <https://otcas.liasoncas.com/>. Applications are processed throughout the year as they are received. Admission to the OTD program is a rolling process such that, beginning in the Fall, applications are reviewed and offers of admission are extended, continuing until the cohort is filled. Thus, it is in the applicant's best interest to apply early to this highly competitive degree program.

Without exception, the February 1 deadline for OTCAS transcript and course verification must be met. If you have questions regarding transcript and course verification, contact OTCAS directly.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from evaluators, typically college/university faculty or an immediate work supervisor, who can provide insight into the applicant's aptitude for graduate study. These letters are to be submitted electronically at <https://otcas.liasoncas.com/>.

**Coursework Required for Admission Consideration:** Required coursework includes:

- Introduction to Psychology
- Introduction to Sociology or Cultural Anthropology (1000-level course, not a 2000- or 3000-level course)
- Anatomy with lab and Physiology (1000-level course, not 2000- or 3000-level course), which can be taken separately or as a combined sequence (e.g., Anatomy and Physiology I with Anatomy lab, or Anatomy and Physiology II). The lab must include human muscular and skeletal anatomy.
- Abnormal Psychology or Psychopathology
- Developmental Psychology or Lifespan Development, which must include a lifespan perspective of development. Two developmental psychology courses in two different life phases are accepted (either child/youth or adult/older adult).
- Physics
- Statistics, Biostatistics or Research Methods

Without exception, grades earned in prerequisite courses must be a "B-" or better for consideration in an application. Prerequisites are not required to have been taken while an undergraduate. The courses may be completed at a local community college or any accredited institution of higher education. AP or CLEP courses are not accepted for prerequisites, except for Introduction to Psychology with a score of 4 or higher. Science courses must be 4 credits. Prerequisites may be in progress at the time of the initial application, but must be completed and verified on one's OTCAS application by February 1 of the year for which application is made.

**Bachelor's Degree in Discipline/Related Discipline:** Completion of a baccalaureate degree in any discipline is not only required but also acceptable for applying to Temple University's Occupational Therapy program as long as the required prerequisites are successfully completed with a grade of "B-" or better. No particular undergraduate program of study is required for occupational therapy.

**Statement of Goals:** The education and practice of occupational therapists demand a great deal of mental flexibility, creativity, teamwork and service to others. Temple OT has a curriculum specifically designed to integrate these aspects into our surrounding community to support student learning and service to our community. Your statement, which is submitted at <https://otcas.liasoncas.com/>, should reflect your interest in this type of curriculum and your capacity to successfully engage in the demands of this type of professional graduate occupational therapy education and practice.

### Standardized Test Scores:

MAT or GRE: Not required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 100
- IELTS Academic: 7.0
- PTE Academic: 68
- Duolingo: 110

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and

physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Clearances:** The Occupational Therapy OTD program requires students to complete clinical/field education experiences at facilities both on and off Temple University's campuses. These placements require a physical examination, immunization records, criminal background checks, Act 33/34 clearances, DHS fingerprinting, Healthcare Provider CPR certification, proof of personal health insurance, an annual influenza vaccine, and perhaps a drug screen. The results of these requirements may limit and potentially eliminate placement options for the student, thus resulting in their inability to meet graduation requirements. Additionally, conviction of a misdemeanor, felony, or felonious or illegal act may prevent the individual from becoming credentialed and/or licensed to practice occupational therapy.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 116

#### Required Courses:

<b>Year 1</b>		
<b>Summer II</b>		<b>Credit Hours</b>
OTHR 5002	Theoretical Perspectives of Occupation	2
OTHR 5005	Neuroscience Perspectives in Occupational Therapy	4
OTHR 8002	Clinical Skills I: Perspectives in Occupational Therapy	2
<b>Credit Hours</b>		<b>8</b>
<b>Fall</b>		
OTHR 5001	Developmental Perspectives in Occupational Therapy	2
OTHR 5008	Kinesiology Perspectives in Occupational Therapy	4
OTHR 5013	Medical Perspectives in Occupational Therapy	3
OTHR 5014	Person-Environment Dynamics in Occupation	1
OTHR 5019	Theoretical Perspectives in Occupational Therapy	2
OTHR 5151	Research I: Evidence-Based Practice in Occupational Therapy	3
OTHR 8003	Clinical Skills II: Fundamentals of Practice	2
<b>Credit Hours</b>		<b>17</b>
<b>Spring</b>		
OTHR 5003	Group Dynamics in Occupational Therapy	3
OTHR 5105	Occupational Therapy Practice: Children & Youth	5
OTHR 5152	Research II: Design and Methodologies in Occupational Therapy	2
OTHR 5185	Occupational Therapy Practice: Fieldwork IA	1

OTHR 5222	Occupational Therapy Practice: Adults and Older Adults	5
<b>Credit Hours</b>		<b>16</b>
<b>Year 2</b>		
<b>Summer I</b>		
OTHR 5161	Occupational Therapy Service Delivery & Management	3
OTHR 5219	Occupational Therapy Practice: Community and Social Participation	3
OTHR 5285	Occupational Therapy Practice: Fieldwork IB	1
<b>Credit Hours</b>		<b>7</b>
<b>Fall</b>		
HRPR 8985	Teaching in Higher Education: Health Professions	3
OTHR 5104	Occupational Therapy Practice: Mental Health	5
OTHR 5221	Health & Wellness in the Community	3
OTHR 5286	Occupational Therapy Practice: Fieldwork IC	1
OTHR 8104	Clinical Skills III: Specialty Skills in Occupational Therapy	2
<b>Credit Hours</b>		<b>14</b>
<b>Spring</b>		
HRPR 8987	Teaching in Higher Education Practicum	3
OTHR 5123	Occupational Therapy Practice: Assistive Technology	4
OTHR 8105	Clinical Skills IV: Professional Reasoning in Occupational Therapy	2
OTHR 8107	International Health Perspectives in Occupational Therapy	2
OTHR 8286		2
<b>Credit Hours</b>		<b>13</b>
<b>Year 3</b>		
<b>Summer I</b>		
OTHR 5287	Intensive Occupational Therapy Practice: Fieldwork IIA	9
OTHR 8287		3
<b>Credit Hours</b>		<b>12</b>
<b>Fall</b>		
OTHR 5288	Intensive Occupational Therapy Practice: Fieldwork IIB	9
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
OTHR 8288		9
OTHR 8289		3
<b>Credit Hours</b>		<b>12</b>
<b>Year 4</b>		
<b>Summer I</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
OTHR 8206	Clinical Skills V: Clinical Leadership	2
OTHR 8208		3
OTHR 8291		3
<b>Credit Hours</b>		<b>8</b>
<b>Total Credit Hours</b>		<b>116</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

**Minimum Grade to be Earned for All Required Courses:** B-

**Culminating Events:**

*Intensive Fieldwork Practica:*

Students may be required to travel up to 90 minutes from their place of residence to a Level I or II clinical site.

Level I: Students participate in a variety of Level I fieldwork experiences that are largely local. However, opportunities do exist for international Level I field experiences.

Level II: Two 12-week supervised full-time fieldwork experiences are required for degree completion. Level II fieldwork must be completed within 24 months of successful completion of all academic courses. Students are assigned to Level II fieldwork either locally or in another state. No international Level II fieldwork experiences are available.

*Doctoral Capstone Project and Experience:*

The doctoral capstone series is interwoven throughout the curriculum to ensure students build foundational knowledge in the critical consumption of evidence and research, understanding of translation and production of research, and the importance of assessment and dissemination of outcomes. Through the capstone course series, students learn to develop, implement and assess a culminating project that encourages further development of clinical practice skills, research skills, administration, leadership, program policy and development, advocacy or education.

The capstone is designed to ensure students attain in-depth knowledge and skill in their interest area while supporting Temple's clinical and community partners throughout the 14-week experience.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/occupational-therapy-dot-hp-othr-dot>

### Department Information:

Programs in Occupational Therapy  
201 Mitten Hall  
1913 N. Broad Street  
Philadelphia, PA 19122-6004  
otprogram@temple.edu  
215-204-4391

### Submission Address for Application Materials:

<https://otcas.liaisoncas.com/>

### Department Contacts:

*Admissions:*  
CPH Office of Admissions  
cph@temple.edu

215-204-5200

Occupational Therapy Admissions  
otadmissions@temple.edu  
445-233-4852  
Cell: 267-908-1734

## Occupational Therapy Transitional Program OTD

COLLEGE OF PUBLIC HEALTH

Learn more about the Clinical Doctorate in Occupational Therapy Transitional Program.

### About the Program

The post-professional transitional Clinical Doctorate in Occupational Therapy (OTD) is designed to attract recent Master of Occupational Therapy (MOT) program graduates, as well as licensed occupational therapists already working in the field and seeking to enhance their careers and advance to leadership positions in clinical and academic environments. This 21-credit doctoral program is offered fully online and designed to meet the needs of the working student.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The degree program must be completed on a full-time basis.

**Ranking:** In 2020, according to *U.S. News & World Report*, Temple University's OT program ranks as the 23rd best occupational therapy program out of 198.

**Accreditation:** Temple University is accredited by the Middle States Commission on Higher Education, which is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

**Job Prospects:** As of 2020, the U.S. Bureau of Labor Statistics projects a 17% growth in occupational therapy until 2030, much higher than average for all jobs.

**Licensure/Certification:** Applicants to the OTD program must be certified and licensed occupational therapists.

**Non-Matriculated Student Policy:** OTD coursework is available only to matriculated students.

**Financing Opportunities:** Financial aid is available to students. For information on financial aid, please contact the Office of Student Financial Services at 215-707-2667.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* August 1

To apply for the tOTD program, the applicant must be a licensed Occupational Therapist.

All applicants apply via the Occupational Therapist Centralized Application Service (OTCAS). The system can be accessed at <https://>

otcas.liasoncas.com/. All application materials listed below are required and should be sent directly to OTCAS:

1. **Official academic transcripts** from all undergraduate and graduate institutions attended.
2. **Three letters of recommendation** from individuals who can speak to your potential for graduate study. Recommenders can be faculty members or immediate work supervisors.
3. **Statement of goals** that is a minimum of one page reflecting on your aptitude for rigorous graduate study and practice in occupational therapy, including the mental flexibility, teamwork and service to others required for success. It should include a description of an area of interest you want to pursue through doctoral studies, explaining connections between this topic and the expertise of the department's faculty members. This is key since you will be working closely with a professor on your capstone research experience.
4. Professional **writing sample**. You may submit either a previously published article or an academic paper from previous coursework.
5. Current **resume**.
6. **Copy of your current state OT license**.
7. Standardized test scores:
  - **GRE scores** are only required if your master's GPA is lower than 3.0. If needed, your score should be in the top 50th percentile on both the verbal and quantitative sections.
  - For applicants whose native language is not English, **TOEFL or Duolingo scores** must be reported. The acceptable minimum is 79 iBT for the TOEFL and 110 for Duolingo.

Questions about the application process should be directed to Occupational Therapy Admissions at otadmissions@temple.edu or 215-204-7213. International students are advised to first visit <https://grad.temple.edu/admissions/international-applicants> for general information about applying to Temple University.

**Master's Degree in Discipline/Related Discipline:** A master's degree in Occupational Therapy is required. Graduates of Temple's 80-credit MOT, in particular, are prepared for the research rigor of the tOTD.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must have earned a baccalaureate degree.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Clearances:** The Occupational Therapy program requires students to complete clinical/field education experiences at facilities both on and off Temple University's campus. These placements require criminal background checks, Act 33/34 clearances, and perhaps a drug screen.

The results of these requirements may limit and potentially eliminate placement options for the student, which can, in turn, result in an inability to meet graduation requirements. Additionally, conviction of a misdemeanor, felony, or felonious or illegal act may prevent the student from becoming credentialed and/or licensed to practice occupational therapy.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 21*

#### Required Courses:

Code	Title	Credit Hours
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
OTHR 8509	Leadership in the Health Professions: The Art and Science of Influence	3
OTHR 8511	Clinical Education and Fieldwork Supervision	3
OTHR 8512	Studies in Outcome Measures and Analysis	3
OTHR 8513	Evidence-Based Practice and Clinical Research	3
OTHR 8514	Occupational Based Theories and Participation	3
OTHR 8902	Capstone Project Inquiry	1
OTHR 8904	Capstone Project Proposal and Implementation	1
OTHR 8905	Capstone Project	1
OTHR 9089	Field Study and Professional Portfolios	3
<b>Total Credit Hours</b>		<b>21</b>

### Minimum Grade to be Earned for All Required Courses: B-

#### Culminating Event:

##### Capstone Project:

OTHR 9089 Field Study and Professional Portfolios is a field study experience that offers students an ideal opportunity to collect data for their capstone research projects; gain hands-on experience with data collection, management and analysis; and participate in mentored clinical experiences that support the central commitment of their doctoral capstone project. The course is offered in the Spring term to allow students the time needed to complete data analysis from the experience and incorporate the findings into their terminal capstone project, which is finalized during the Summer semester.

Students are assigned a faculty advisor to guide the capstone experience over a series of coursework: OTHR 8902 Capstone Project Inquiry, OTHR 8904 Capstone Project Proposal and Implementation, and OTHR 8905 Capstone Project. Outcomes from the capstone project are expected to be disseminated through presentations or publications and/or to be incorporated into clinical practice.

## Contacts

### Program Web Address:

<https://cph.temple.edu/academics/areas-study/occupational-therapy>

### Department Information:

Programs in Occupational Therapy  
201 Mitten Hall  
1913 N. Broad Street  
Philadelphia, PA 19122-6004

otprogram@temple.edu  
215-204-4391

## Submission Address for Application Materials:

<https://sophasexpress.liaisoncas.com/applicant-ux/#/login>

## Department Contacts:

*Admissions:*  
CPH Office of Admissions  
cph@temple.edu  
215-204-5200

## Physical Therapy DPT

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Physical Therapy.

## About the Program

Physical therapy is a healthcare profession with a purpose to promote human health and function by applying evidence to identify, assess, remediate or prevent human movement dysfunction. Physical therapists are concerned with the physical well-being of their clients and patients. They recognize the need to understand and respond to the sociocultural beliefs of the person and family receiving physical therapy services. And they accept full responsibility for the patients or clients in their care and for the development of their profession.

The mission of the Doctor of Physical Therapy (DPT) program at Temple University is to prepare graduates to be leaders in the profession, healthcare and society. The mission is accomplished by providing contemporary education, research and service to people, persons and populations.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** All required courses in the Doctor of Physical Therapy program are offered weekdays on a full-time basis.

**Accreditation:** The DPT program is accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE) through 2025.

**Job Prospects:** Graduates with the DPT degree are poised to meet the demand for physical therapy services for an increasingly diverse population in acute care centers, independent outpatient orthopedic clinics, rehabilitation centers and clinics, skilled care facilities, and sports medicine clinics.

**Licensure/Certification:** For more information about state licensure, see <https://www.fsbpt.org/Free-Resources/Licensing-Authorities-Contact-Information>.

**Non-Matriculated Student Policy:** Only matriculated students may enroll in DPT coursework.

**Financing Opportunities:** Contact the Doctor of Physical Therapy program for information.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer I:*

- June 15 - Application Cycle Opens
- November 1 - Application Cycle Ends

All applicants to the DPT program must apply via the Physical Therapy Centralized Application System (PTCAS). The system can be accessed at <https://ptcas.liaisoncas.com/>. It is recommended that the PTCAS application be completed by early October so PTCAS has ample time to fully verify the application, which must be done prior to review by Temple University.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from individuals who can judge the applicant's ability to succeed in a professional graduate program in Physical Therapy. Individuals typically positioned to provide such assessment include university faculty members, physical therapy clinicians, and employers. One reference must be from a physical therapist who can provide perspective on your ability as a student and future physical therapist. The second letter of reference must be from an academic professor who can provide an assessment of your ability to succeed with the academic rigor of a doctoral-level program. Notify the references to expect an online reference form from PTCAS once you begin the application process.

**Coursework Required for Admission Consideration:** Applicants must complete 10 prerequisite courses totaling 37 credits with a minimum cumulative GPA of 3.0 and no grades below a "C" (2.0). An applicant is permitted to apply with 6 of the 10 required prerequisite courses completed. If outstanding coursework exists, the admitted student must provide proof that sufficient grades were earned in all courses upon completion. Pass/fail for prerequisite courses is acceptable on a case-by-case basis due to COVID-19. Laboratories for science-based courses should not be online, but rather in-person traditional laboratories. Online lecture components are acceptable.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must possess a completed baccalaureate degree in any discipline with a minimum GPA of 3.0 on a 4.0 scale or be designated as matriculating in an internal articulation agreement (i.e., Temple 3+3 applicant) between approved undergraduate departments at Temple University and the Doctor of Physical Therapy program.

**Statement of Goals:** Three essay opportunities are presented within the PTCAS application for the applicant to respond to program and profession-specific questions.

### Standardized Test Scores:

GRE: Not required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Interview:** Qualified applicants are invited to interview with faculty and students of the DPT program. In-person interviews are preferred, and virtual interviews are available in certain cases.

**Physical Therapy Observation Hours/Experience:** In the interview process, applicants are expected to demonstrate physical therapy professional experience/knowledge either through unpaid volunteerism or a paid clinical position. It is recommended that an applicant seek out service and leadership opportunities and have completed observation/volunteer hours in a variety of physical therapy settings. No minimum number of hours is required, but it is recommended that applicants consider a sufficient number of hours to ensure they have an understanding of that area of the profession.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Clearances:** The Physical Therapy DPT program requires students to complete clinical/field education experiences at facilities both on and off Temple University's campuses. These placements require FBI and state criminal background checks, child abuse history clearance, and a drug screen. Proof of adequate immunization and updated Tuberculin Skin Test (PPD) records are requirements for clinical rotations. Details can be found here: <https://studenthealth.temple.edu/hsc-cph-students/prematriculation-immunizations>. Students are required to follow Temple University policies for vaccination against COVID-19 (<https://www.temple.edu/coronavirus/vaccines>). Placements also require the student to maintain personal health insurance. The results of these requirements may limit and potentially eliminate placement options for the student, thus resulting in their inability to meet graduation requirements. Additionally, conviction of a misdemeanor, felony, or felonious or illegal act may prevent the individual from becoming credentialed and/or licensed to practice physical therapy.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Bachelor's:* 117, excluding any prerequisite coursework

*Required Courses:*

Year 1		Credit Hours
<b>Summer I</b>		
PHTH 8101	Introduction to Physical Therapy <sup>1</sup>	1
PHTH 8102	Teaching, Learning, Group Dynamics <sup>1</sup>	2
PHTH 8103	Clinical Examination and Intervention Skills I <sup>1</sup>	2
PHTH 8105	Human Anatomy I <sup>1</sup>	6
<b>Credit Hours</b>		<b>11</b>
<b>Fall</b>		
PHTH 8107	Functional Biomechanics	3
PHTH 8109	Human Physiology and Pathology I	3
PHTH 8111	Clinical Examination and Intervention Skills II	3
PHTH 8113	Evidence Based Practice I	2
PHTH 8161	Integrated Clinical Experience 1	1
<b>Credit Hours</b>		<b>12</b>
<b>Spring</b>		
PHTH 8114	Neuroscience	3
PHTH 8115	Human Physiology and Pathology II	3
PHTH 8116	Motor Control and Learning	3
PHTH 8118	Clinical Examination and Intervention Skills III	3
PHTH 8121	Clinical Electrophysiology and Biophysical Agents	3
PHTH 8162	Integrated Clinical Experience 2	1
<b>Credit Hours</b>		<b>16</b>
<b>Summer</b>		
PHTH 8123	Development Across the Lifespan <sup>1</sup>	2
PHTH 8125	Clinical Management of Musculoskeletal Conditions I <sup>1</sup>	4
PHTH 8127	Clinical Management of Neuromuscular Conditions I <sup>1</sup>	4
PHTH 8163	Integrated Clinical Experience 3 <sup>1</sup>	1
<b>Credit Hours</b>		<b>11</b>
<b>Year 2</b>		
<b>Fall</b>		
PHTH 8129	Psychosocial Aspects	2
PHTH 8131	Clinical Management of Musculoskeletal Conditions II	4
PHTH 8133	Clinical Management of Neuromuscular Conditions II	4
PHTH 8135	Clinical Management of Cardiopulmonary Conditions	3
PHTH 8136	Bioethics	2
PHTH 8137	Evidence Based Practice II	2
PHTH 8164	Integrated Clinical Experience 4	1
<b>Credit Hours</b>		<b>18</b>
<b>Spring</b>		
PHTH 8138	Management and Healthcare Systems	2
PHTH 8139	Medical Diagnostics	2
PHTH 8141	Clinical Management of Musculoskeletal Conditions III	4
PHTH 8143	Management of the Medically Complex Patient	3
PHTH 8145	Pharmacotherapeutics	2
PHTH 8146	Clinical Management of Pediatrics	2

PHTH 8165	Integrated Clinical Experience 5	1
<b>Credit Hours</b>		<b>16</b>
<b>Summer</b>		
PHTH 9185	Clinical Experience 1 <sup>2</sup>	8
<b>Credit Hours</b>		<b>8</b>
<b>Year 3</b>		
<b>Fall</b>		
PHTH 8147	Clinical Pain Sciences	1
PHTH 8148	Assistive Technologies	2
PHTH 8151	Evidence Based Practice III	2
PHTH 8160	Special Topics - Integrated Learning Experience	1
PHTH 9285	Clinical Experience 2 <sup>3</sup>	4
Select two from the following:		
PHTH 8150 Elective - Special Topics		
PHTH 8152 Elective - Musculoskeletal		
PHTH 8153 Elective - Vestibular		
PHTH 8154 Elective - Clinical Simulation		
PHTH 8155 Elective - Pediatrics		
PHTH 8156 Elective - Geriatrics		
<b>Electives</b>		<b>3</b>
<b>Credit Hours</b>		<b>13</b>
<b>Spring</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>4</sup>	0
PHTH 9285	Clinical Experience 2 <sup>5</sup>	4
PHTH 9385	Clinical Experience 3 <sup>6</sup>	8
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>117</b>

1

Courses are taken for 12 weeks, spanning the Summer I and II terms.

2

PHTH 9185 is taken for 12 weeks, spanning the Summer I term ending Year 2 and the Summer II term beginning Year 3.

3

Six weeks of clinical education (PHTH 9285) follows ten weeks of the coursework identified above.

4

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

5

Begun in the Fall term of Year 3, PHTH 9285 extends into the Spring term for six additional weeks.

6

Immediately following conclusion of PHTH 9285 Clinical Experience 2, PHTH 9385 is taken for the remaining 12 weeks of the Spring term.

**Minimum Grade for All Required Courses: B-**

#### **Culminating Events:**

##### *Clinical Experiences:*

Three full-time clinical experiences are required over the course of the degree program. Additionally, beginning in the Fall term of Year 1 and

throughout Year 2, five part-time clinical experiences allow students to practice and apply current didactic skills with a variety of patient populations.

The full-time clinical experiences include:

- PHTH 9185 Clinical Experience 1, taken for 8 credits over 12 weeks in the Summer term between Years 2 and 3.
- PHTH 9285 Clinical Experience 2, taken for 8 credits over 12 weeks beginning in the Fall term of Year 3 and extending into the Spring term of that same academic year.
- PHTH 9385 Clinical Experience 3, taken for 8 credits over 12 weeks immediately following completion of PHTH 9285 Clinical Experience 2.

#### *Practice Project and Comprehensive Patient Evaluation:*

Several didactic and psychomotor assessments are offered throughout the curriculum to ensure student preparedness and clinical readiness. In the Fall term of Year 3, each student participates in a mentored evidence-based practice project and completes a comprehensive practical evaluation.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/physical-therapy-dpt-hp-phth-dpt>

### **Department Information:**

Doctor of Physical Therapy Program  
Ritter Hall Annex, 6th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
deptpt@temple.edu  
215-204-9066

### **Submission Address for Application Materials:**

<https://ptcas.liasoncas.com/>

### **Department Contacts:**

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Interim Graduate Program Director:*

William Egan, DPT  
Associate Professor of Instruction  
william.egan@temple.edu  
215-204-9024

#### *Chairperson:*

Janet Prvu Bettger, ScD MS FAHA  
Professor  
janet.bettger@temple.edu



# Public Health Data Science MS

## COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Science in Public Health Data Science.

## About the Program

The Public Health Data Science (MS PHDS) master's degree program focuses on the intersection of biostatistics, computational biostatistics, epidemiology and public health fundamentals. It is responsive to the national call to address the shortage in data science in the United States. This 36-credit MS is designed to equip graduates to meet the growing demand for public health data scientists who have an in-depth understanding of biostatistical methods and excellent data analytical skills to improve health care and population health. Students learn to conceptualize health problems and use state-of-the-art biostatistical and data-analytical tools and techniques to design, manage and analyze health and health-related data to produce value-adding analytic insights. They also learn how to effectively combine and communicate these insights to inform evidence-based public health decision-making.

The MS PHDS program builds on a strong biostatistical and programming foundation with specialized biostatistics courses aimed to build mastery in targeted data analyses while addressing statistical uncertainty. Our curriculum focuses on specialized data analysis courses such as those arising in randomized or nonrandomized (i.e., observational) studies, inferential investigation of large datasets such as electronic health records, and statistical modeling in the context of public health. Students have a unique opportunity to learn practical data analytical techniques and gain the ability to comfortably use complex data structures in efficient computational fashion while addressing important biostatistical complexities such as sampling design and correlated data in public health and health sciences. They also gain an understanding of the substantive contexts informing statistical analyses with varying challenges.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The program is designed to accommodate both full- and part-time students. Full-time students can earn their degree within 2 years, while part-time students typically complete the degree in 3 years.

**Accreditation:** The MS in Public Health Data Science is a graduate program in Temple's College of Public Health, which is accredited by the Council on Education for Public Health (CEPH).

**Job Prospects:** Graduates of the MS PHDS program are qualified to work as biostatisticians or data scientists in public health, pharmaceutical and research institutions, as well as many government organizations. Demand for data scientists with the ability to infer conclusions at the population level and make recommendations for public health and medicine currently exceeds supply by 50-60%. Job growth in the discipline is also projected to have a much faster rate of growth than average at 33% annually.

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the professor, whether the coursework is taken in the on-campus or online format. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program. Course selection should be made in consultation with

an advisor, and students should be aware that completion of coursework does not ensure admission into the program.

**Financing Opportunities:** Limited Teaching and Research Assistantships are available in the College of Public Health. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to or at the application deadline are reviewed for eligibility for Teaching Assistant (TA) positions. TAs can work 5 to 20 hours per week in any combination of teaching assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs, and the Graduate School. Both assistantships carry a minimum stipend and full tuition remission for up to 9 credits per term. To be considered for a Teaching or Research Assistantship, complete an application form that is sent to students upon admission to the program. The completed application must be returned to [publichealth@temple.edu](mailto:publichealth@temple.edu) to be considered.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

All applicants to the MS PHDS program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200. ([annemarie@temple.edu](mailto:annemarie@temple.edu))

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with the applicant's academic competence and, if appropriate, research supervisors or mentors.

**Coursework Required for Admission Consideration:** Proficiency in statistical programming and a minimum of 6 credits of undergraduate quantitative and/or analytical methods (statistics, research design, etc.) are required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0.

A WES evaluation is required for applicants who completed their bachelor's degree outside of the United States. This can be requested at <https://www.wes.org/> and submitted through SOPHAS.

**Statement of Goals:** Write a well-considered 500- to 1,000-word statement of purpose that articulates your interests in public health and our program in particular. Craft your statement to specifically address the following questions:

- Why are you pursuing this master's degree program, and what are your particular areas of interest in public health?

- How does the MS PHDS within Temple's Department of Epidemiology and Biostatistics best fit your public health interests?
- What are your career goals, and how will this degree help you to achieve these goals?
- What are your plans in the first few years after graduation?

#### Standardized Test Scores:

GRE: Required. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. Scores above the 75th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151.

Standardized tests considered in lieu of the GRE include DAT, GMAT, MCAT, OAT and PCAT.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Interview:** An interview may be required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an accredited institution are considered for transfer into the MS PHDS degree program. Such courses are reviewed by the MS Graduate Program Director to determine whether they are equivalent to coursework offered at Temple and fulfill any degree requirements. The grade must be a "B" or better in order to transfer and have been earned within five years of applying to the program. The maximum number of credits that may be transferred into the MS program is 6.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required to Earn the Degree: 36*

*Required Courses:*

Code	Title	Credit Hours
<b>College Core Courses</b>		
EPBI 5201	Epidemiological Research Methods I	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Data Science Core Courses</b>		
EPBI 5002	Biostatistics	3
EPBI 8012	Multivariable Biostatistics	3
EPBI 8208	Data Management and Analysis	3
STAT 8001	Probability and Statistics Theory I	3
STAT 8002	Probability and Statistics Theory II	3
Select one from the following programming courses:		3
HIM 5102	Applications of Computer Programming in Health Informatics	
HIM 5190	Special Topics <sup>1</sup>	
HIM 5299	Introduction to Language Processing and Text Mining for Health Professionals	
<b>Public Health Data Science Electives</b>		
Select four from the following:		12
EPBI 8201	Structural Equation Modeling	
EPBI 8204	Multilevel Mod in Int Res	
EPBI 8302	Behavioral Measurement	
EPBI 8304	Applied Statistical Methods for Incomplete Data Analysis	
EPBI 8305		
EPBI 8306		
EPBI 8403	Applied Concepts and Methods in Health Research	
GUS 5069	GIS for Health Data Analysis	
<b>Consulting Practicum</b>		
EPBI 9187	Biostat Cnslt Practicum	3
<b>Total Credit Hours</b>		<b>36</b>

1

Students are expected to take "Applications of Computer Programming in Health Informatics" as the HIM 5190 Special Topics course.

**Minimum Grade to be Earned for All Required Courses: B-**

#### Culminating Event:

*Biostatistics Practicum:*

Biostatistics is a field concerned with research subjects motivated by real data and problems in public health, biology and medicine. Through our Biostatistics Core, students gain critical hands-on experience in collaborative projects. EPBI 9187 Biostat Cnslt Practicum is a project-based course that prepares students to collaborate effectively as biostatisticians in the workforce. Emphasis is on providing hands-on experience using statistical techniques on real-life applications and developing communication and problem-solving skills. This course is designed for graduate students to achieve fluency in widely used statistical software, such as R and SAS, for the analyses of data from observational and/or interventional research studies.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/public-health-data-science-ms-hp-phds-ms>

### Department Information:

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
epibio@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

#### Admissions:

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### Program Director:

Recai Yucel, PhD  
Professor  
recai.yucel@temple.edu  
215-204-2055

#### Graduate Program Director:

Aimee J. Palumbo, PhD, MPH  
Associate Professor  
aimee.palumbo@temple.edu  
215-204-4023

#### Chairperson:

Resa M. Jones, MPH, PhD  
Associate Professor  
resa.jones@temple.edu  
215-204-7881

## Recreational Therapy MS

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Science in Recreational Therapy.

### About the Program

The 36-credit online MS in Recreational Therapy is designed for individuals who want to advance their knowledge and skills related to evidence-based practice within healthcare and human services. The curriculum teaches from a conceptual model of health promotion and rehabilitation and maintains a lifespan perspective in three core areas: health, disability and leisure. The primary focus of academic and clinical preparation is on training recreational therapists to use play, recreation and leisure to achieve and maintain goals related to health promotion, rehabilitation and full participation in an active, meaningful life. Specialization coursework can be used to meet advanced certification.

The faculty utilize contemporary educational and learning technologies to impart the most current cutting-edge practitioner and leadership skills central to today's healthcare and human service provision. This is done while maintaining the timeless concepts of health, recreation and leisure as that is what drives the human spirit. The online MS in Recreational Therapy program is designed for those who strive to be leaders in recreational therapy and share a drive to improve the lives of others while harnessing the value inherent in, and benefits derived from, recreational activities.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Online, with a combination of asynchronous components (discussion boards and other assignments completed by students on their own time) and synchronous components (web conference-based live class discussions, chat rooms and video meetings)

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Interdisciplinary study is encouraged and may be geared toward the student's personal interests (e.g., counseling, exercise science, special education). The diversity of departments and programs in the College of Public Health presents abundant opportunities for cross-disciplinary learning. Additionally, part of the academic experience in the Department of Health and Rehabilitation Sciences involves inter-professional education.

**Affiliation(s):** Numerous healthcare and human service agencies in Philadelphia and the surrounding Delaware Valley region cooperate with the Department of Health and Rehabilitation Sciences and offer opportunities for student training and research. These include nationally recognized rehabilitation facilities such as Children's Hospital of Philadelphia, Magee Rehabilitation Hospital, MossRehab, the Princeton Medical Center, Shriner's Hospital, the Temple University Hospital and Health System, and the Variety Club Camp and Developmental Center.

Additionally, graduate students are encouraged and supported to complete internships/clinical practicums in an extensive network of agencies cultivated by the program over the years. These include placements across the country, including California, Colorado, Florida, Georgia, Illinois, Montana and Virginia.

**Ranking:** The faculty and the program are nationally recognized for excellence and have received numerous national and state awards for their contributions. Graduates of the program consistently perform well on the national credentialing examination for certified recreational therapists.

**Accreditation:** The academic program meets or exceeds all current curriculum standards issued by the National Council for Therapeutic Recreation Certification (NCTRC) and other professional organizations.

**Areas of Specialization:** Faculty members specialize and offer learning opportunities in adapted sport and inclusive recreation, behavioral health, geriatrics, health promotion and rehabilitation, pediatrics and physical rehabilitation.

**Job Prospects:** Graduates of the program are highly sought for advanced clinical/management positions in adult day programs, assisted living facilities, community settings providing specialized services to individuals with disabilities, hospitals, nursing homes and pediatric facilities. Graduates who use the degree to enter this field are also highly sought after to begin practicing as recreational therapists.

**Licensure/Certification:** A license is required to practice recreational therapy in the following states: New Hampshire, New Jersey, North Carolina, Oklahoma and Utah. The National Council for Therapeutic Recreation Certification (NCTRC) administers an examination that students must pass in order to become a Certified Therapeutic Recreation Specialist (CTRS). Graduates from Temple's Master of Science in Recreational Therapy program meet the educational eligibility requirements to sit for the NCTRC exam. For more information, visit <https://www.atra-online.com/page/CertandLicense>.

**Non-Matriculated Student Policy:** Students are allowed to take up to 9 credits of graduate coursework before matriculation. Selection of courses must be made in conjunction with the Graduate Program Director in the Department of Health and Rehabilitation Sciences.

**Financing Opportunities:** Limited funding opportunities are sometimes available in the form of teaching or research assistantships or externships:

- Assistants are expected to devote up to 20 hours per week to teaching or research obligations. Availability depends on courses offered or whether faculty have externally funded research grants. Assignments vary depending on the nature of the grant. Assistantships carry a stipend and partial or full tuition remission.
- Graduate Externs are hired by other divisions of the university, which make offers directly. For example, Campus Recreation hires externs to conduct student recreation events, and the Institute on Disabilities hires externs to assist with various projects. Externs do not receive tuition remission.

Applying for a position as a Teaching or Research Assistant or Graduate Extern is done online and involves outlining relevant qualifications and experience. Students are notified as opportunities become available.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

*Spring:* November 1

All applicants to the MS in Recreational Therapy program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

### Letters of Reference:

*Number Required:* 3

*From Whom:* One letter of recommendation should be written by a faculty member who can comment on your academic ability. The others can be from professional references who can speak to your work-related competencies.

**Coursework Required for Admission Consideration:** If admitted, students lacking NCTRC national credentialing are required to take leveling and supportive undergraduate courses, in addition to the MS degree requirements, prior to completion of 15 credits in the program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from an accredited institution is required. All undergraduate majors are considered. A GPA of 3.0 or higher on a 4.0 scale is required, but applicants with a GPA below 3.0 may be considered for admission based on scores at or above the 65th percentile on the Graduate Record

Exam (GRE) or Miller Analogy Test (MAT) or a GPA of 3.25 in 9 credits of graduate-level coursework.

**Statement of Goals:** Write an essay of approximately 1,000 words that responds to these questions:

- How have your recreation and leisure experiences contributed to your health and personal growth? Consider different areas of wellness and how these components have interacted and influenced each other in your life.
- What, if any, experience do you have in working with individuals with disabilities?
- What are your interests in and career goals related to recreational therapy?

Your essay is evaluated on the quality of your writing and synthesis of ideas, which are expected to be of a certain standard at the master's level. It benefits your application if you highlight relevant active volunteerism, work experience(s) that developed relevant skills, and/or past leadership experience. The essay allows the department to determine your fit with the program.

### Standardized Test Scores:

GRE/MAT: Optional, although applicants who believe GRE scores would complement their application are encouraged to submit scores to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current professional resume required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an accredited institution are considered for transfer into the MS in Recreational Therapy degree program. Such courses are reviewed by the MS Program Coordinator to determine whether they are equivalent to coursework offered at Temple and fulfill any degree requirements. The grade must be a "B" or better in order to transfer and have been earned within five years of applying to

the program. The maximum number of credits that may be transferred into the MS program is 6.

**Clearances:** The Recreational Therapy MS program requires students to complete clinical/field education experiences at various facilities. These placements require criminal background checks, Act 33/34 clearances, and perhaps a drug screen. Placements may also require the student to maintain personal health insurance and/or to submit proof of a physical and immunization records. The results of these requirements may limit and potentially eliminate placement options for the student, thus resulting in their inability to meet graduation requirements. Additionally, conviction of a misdemeanor, felony, or felonious or illegal act may prevent the individual from becoming credentialed and/or licensed to practice in the field of therapeutic recreation.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:*

- 36 for those who hold NCTRC national certification (see Course Sequence A).
- 36 plus 3 credits of Recreational Therapy-specific leveling coursework for those without NCTRC national certification (see Course Sequence B). Note that other supportive coursework may be required to sit for the national credentialing examination for therapeutic recreation specialist certification. Specialization electives can be used to meet advanced certification from NCTRC after one year of full-time employment as a recreational therapist.

*Required Courses:*

### Course Sequence A (for those with NCTRC national certification)

Code	Title	Credit Hours
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0

#### A1: Required Core Graduate Courses

RCTH 5001	Graduate Research I in Recreational Therapy	3
RCTH 5102	Recreational Therapy: Now and Then	3
RCTH 5301	Evidence Based Practice in Recreational Therapy I	3
RCTH 5302	Evidence Based Practice in Recreational Therapy II	3
RCTH 5311	Conceptual and Contemporary Issues in Recreational Therapy	3
RCTH 5312	Leisure, Health, and Recreational Therapy Interventions	3
RCTH 5402	Recreational Therapy Administration and Management	3
RCTH 5442	Program Planning and Practice in Recreational Therapy	3

#### A2: Electives

Select four of the following based on interests/needs:		12
HRPR 8985	Teaching in Higher Education: Health Professions	
RCTH 5009	Entrepreneurship in the Health Professions	
RCTH 5201	Managing Dementia Care	
RCTH 5204	Recreational Therapy and Assistive Technology	
RCTH 5212	Play and Pediatric Development	

RCTH 5213		
RCTH 5214	Child Life Interventions	
RCTH 5250	Special Topics in Recreational Therapy	
RCTH 5314	Leisure-time Physical Activity and Community Engagement in Recreational Therapy	
RCTH 5315	Social Engagement and Community Participation in Recreational Therapy	
RCTH 5316	Measuring Health and Disability: The ICF Model	
RCTH 5382	Independent Study	
<b>Total Credit Hours</b>		<b>36</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

### Course Sequence B (for those without NCTRC national certification)

Code	Title	Credit Hours
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0

#### B1: Required Leveling/Supportive Undergraduate Courses <sup>2</sup>

KINS 1223	Human Anatomy and Physiology I	4
PSY 2201	Foundations of Psychopathology	3
PSY 2301	Foundations of Developmental Psychology	3
RCTH 3096	Assessment and Documentation in Recreational Therapy	3

Additional credits in a variety of Health and Human Service content areas (e.g., medical terminology, public health, social work, sociology, etc.)

Code	Title	Credit Hours
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#### B2: Required Core Graduate Courses

RCTH 5001	Graduate Research I in Recreational Therapy	3
RCTH 5102	Recreational Therapy: Now and Then	3
RCTH 5301	Evidence Based Practice in Recreational Therapy I	3
RCTH 5302	Evidence Based Practice in Recreational Therapy II	3
RCTH 5311	Conceptual and Contemporary Issues in Recreational Therapy	3
RCTH 5312	Leisure, Health, and Recreational Therapy Interventions	3
RCTH 5402	Recreational Therapy Administration and Management	3
RCTH 5442	Program Planning and Practice in Recreational Therapy	3
RCTH 5787	Recreational Therapy Practicum <sup>3</sup>	3

#### B3: Electives

Select three of the following based on interests/needs:		9
RCTH 5009	Entrepreneurship in the Health Professions	
RCTH 5201	Managing Dementia Care	
RCTH 5204	Recreational Therapy and Assistive Technology	

RCTH 5212	Play and Pediatric Development
RCTH 5213	
RCTH 5214	Child Life Interventions
RCTH 5250	Special Topics in Recreational Therapy
RCTH 5261	Disability Seminar on Developmental Disabilities and Mental Health Conditions
RCTH 5271	Disability Seminar on Physical and Neurological Health Conditions
RCTH 5314	Leisure-time Physical Activity and Community Engagement in Recreational Therapy
RCTH 5315	Social Engagement and Community Participation in Recreational Therapy
RCTH 5316	Measuring Health and Disability: The ICF Model
RCTH 5382	Independent Study

**Total Credit Hours** **36**

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Depending on one's undergraduate major, some requirements may have already been completed. These credits do not count toward the MS credit totals, but are needed in order to be eligible to sit for the NCTRC certification exam (see <https://www.nctrc.org/>). The MS Program Coordinator reviews official transcript(s) and identifies any coursework needed. Any uncompleted requirements may be taken at an institution other than Temple University, with approval of the MS Program Coordinator. All required leveling/supportive undergraduate coursework must be completed by the time the student has accrued 15 credits in the MS program at Temple University.

3

RCTH 5787 Recreational Therapy Practicum is a 600-hour field placement experience under the supervision of a full-time Certified Therapeutic Recreation Specialist (CTRS) at an approved agency site. The student works with a faculty advisor in the selection of a site for this experience. RCTH 5787 is designed to meet NCTRC internship requirements for eligibility to sit for the NCTRC certification exam.

**Minimum Grade to be Earned for All Required Courses: B-**

**Culminating Event:** Successful completion of coursework constitutes the culminating event for the MS in Recreational Therapy.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/recreational-therapy-ms-hp-rlth-ms>

### Department Information:

Department of Health and Rehabilitation Sciences  
Recreational Therapy Program  
1700 N. Broad Street, Suite 304  
Philadelphia, PA 19121-3429  
[gena.vargas@temple.edu](mailto:gena.vargas@temple.edu)  
215-204-7010

## Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

## Department Contacts:

*Admissions:*

CPH Office of Admissions  
[cph@temple.edu](mailto:cph@temple.edu)  
215-204-5200

*Graduate Program Coordinator:*

Gena Bell Vargas, PhD, CTRS  
[gena.vargas@temple.edu](mailto:gena.vargas@temple.edu)  
215-204-7010

## Social and Behavioral Sciences MPH

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Public Health in Social and Behavioral Sciences.

### About the Program

The Department of Social and Behavioral Sciences offers the Master of Public Health in Social and Behavioral Sciences (MPH-SBS). The MPH in SBS is a terminal, professional degree that prepares students to design, implement and evaluate interventions directed toward public health problems in communities, within the lens of inclusive practice. This program aims to prepare public health practitioners to identify and assess the needs of populations; plan, implement and evaluate programs to address those needs; and ensure that the needs of diverse populations are met to improve overall health status and outcomes. The program has a strong focus on addressing the behavioral, social and cultural factors related to individual and population health and health disparities over the life course, as well as the social and behavioral aspects of community health, health communication, program implementation and evaluation, and health education. Research and practice in this area contribute to the development, administration and evaluation of programs in public health, which promote and sustain healthy lives for individuals and communities.

Applicants to the MPH in Social and Behavioral Sciences can choose between our on-campus and online programs, both of which adhere to the same competency-based curriculum and content. Only the delivery formats differ:

- The on-campus format is designed for students who prefer live interaction with instructors and fellow students, access to campus activities, and the opportunity to choose regional Philadelphia fieldwork placements with the assistance of our fieldwork coordinator. Students can enroll full-time or part-time. While some courses may be offered online or in hybrid formats, most of the coursework is delivered in person over a full 16-week academic term during evening hours.
- The online format is designed for working professionals interested in completing their degree remotely with courses that include synchronous classes held via Zoom and asynchronous activities. Students can enroll full-time or part-time. A fieldwork coordinator

works with students to find appropriate placement in their preferred geographic location.

For more information about the on-campus or online MPH program, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main for in-person instruction or Online

**Full-Time/Part-Time Status:** Full-time students usually complete the program within two academic years, while part-time students usually take three to four years to complete their degree.

**Interdisciplinary Study:** Interdisciplinary MPH coursework, research and interactions with students and faculty in other departments are encouraged to give students as broad a perspective as possible to excel in the complex, diverse and dynamic state of public health. Through associations with research laboratories in the Department of Social and Behavioral Sciences, such as the Center for Obesity Research and Education, the Health Behavior Research Clinic, the Health Disparities Research Lab, the Risk Communication Laboratory, and the Social and Behavioral Health Interventions Laboratory, as well as other laboratories throughout the College, students have access to over 100 faculty at Temple University and additional regional scholars who are actively involved in programs, research and teaching in public health. Further, as with other MPH degree programs offered by the College of Public Health, the MPH in Social and Behavioral Sciences can be undertaken as part of these dual MPH degree programs:

- MD/MPH with the Lewis Katz School of Medicine at Temple University
- MS Health Informatics/MPH within the Temple University College of Public Health
- MSW/MPH with the Temple University School of Social Work

For more information, visit <https://www.temple.edu/academics/dual-degree-programs> or contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu).

**Affiliation(s):** The MPH-SBS maintains dozens of affiliation agreements with community partners relevant to public health professionals studying and applying social and behavioral interventions to address public and community health priorities. MPH students choose community agency fieldwork placement from this array of options throughout the Philadelphia region and beyond. For example, the program has long-standing research and fieldwork affiliations with The Food Trust; Fox Chase Cancer Center; Health Federation of Philadelphia; Maternity Care Coalition; NORTH, INC.; Philadelphia Department of Public Health; Public Health Management Corporation (PHMC) and its subsidiaries; the School District of Philadelphia; and many other community health agencies. These partnerships allow us to offer students a wide range of fieldwork opportunities to translate skills learned in the classroom to actual practice in the community.

The MPH fieldwork coordinator assists online students in finding appropriate placement in their preferred geographic region.

**Study Abroad:** Depending on faculty availability, study abroad opportunities may be offered during the summer and are open to both undergraduate and graduate students.

**Accreditation:** The MPH is fully accredited by the Council on Education for Public Health (CEPH). Achieving accreditation in 1985, Temple's MPH program is one of the longest established accredited MPH programs in the country.

**Areas of Specialization:** The MPH degree program is offered in six specialty fields of study:

- Applied Biostatistics (APBIO)
- Environmental Health (EH)
- Epidemiology (EPI)
- Health Policy and Management (HPM)
- Nutrition (NUTR)
- Social and Behavioral Sciences (SBS)

Students in the Social and Behavioral Sciences MPH program may complete transcripted College of Public Health certificate programs by taking their 9 credits of electives in the relevant coursework. For questions about certificates, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Job Prospects:** Graduates with an MPH in Social and Behavioral Sciences have positions in a wide range of health-related settings, including state and local public health departments, community-based organizations, voluntary health agencies, health maintenance organizations, hospitals, clinics, schools and public health-related work sites. Graduates are employed as health educators and counselors, evaluation specialists, marketing specialists, prevention specialists, project directors, research and community health program managers, HIV/AIDS coordinators, infection control coordinators, adjunct faculty and consultants. Virtually all students are placed within three to six months of graduation.

**Licensure/Certification:** Students who complete an MPH at Temple University are eligible to sit for the Certified in Public Health (CPH) exam offered by the National Board of Public Health Examiners and the Certified Health Education Specialist (CHES®) exam offered by the National Commission for Health Education Credentialing, Inc. (NCHCEC). For more information about credentialing in public health, visit <https://www.nchec.org/>.

**Non-Matriculated Student Policy:** Non-matriculated students are required to speak with an advisor before registering for classes and to obtain the permission of the professor, whether the coursework is taken in the on-campus or online format. If accepted to the program, a maximum of three courses (9 credits) may be applied toward the degree program.

**Financing Opportunities:** Limited Teaching and Research Assistantships are available in the College of Public Health and are assigned on a competitive basis among students who academically excel. The Graduate School website details the types of graduate student support. Assistantships are awarded on a term or annual basis. Students whose Fall applications are complete prior to or at the application deadline are reviewed for eligibility for Teaching Assistant (TA) positions. TAs can work 5 to 20 hours per week in any combination of teaching assignments made by the department and must meet the English Language Proficiency standards set by the University and the College. Students who hold Teaching or Research Assistantships are not permitted to hold other employment without the written prior approval of their advisor, the Director of Graduate Programs and the Graduate School. To be considered for a Teaching or Research Assistantship,

complete an application form that is sent to students upon admission to the MPH program.

In both the Fall and Spring terms, the College of Public Health and Department of Social and Behavioral Sciences award a limited number of partial scholarships on a competitive basis to students with an outstanding academic record. No separate application is needed for these awards as outstanding applicants are automatically considered following submission of their application. Other available scholarships are listed at <https://cph.temple.edu/admissions/scholarships>. Students may also be eligible for financial support through the Office of Student Financial Services. For more information, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* November 1

All applicants to the MPH program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Deposit Deadline for Admitted Applicants:

*Fall:* April 30  
*Spring:* December 15

Applicants who are accepted to the program must pay a \$500 deposit to secure their enrollment. For questions about the deposit and payment process or to request an extension, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation, which are completed electronically through the SOPHAS system, should be obtained from college/university faculty members familiar with academic competence. If the applicant has been out of school for an extended period of time, ensure that letters are provided by supervising employers or professional colleagues who can discuss your relevant academic skills, including critical thinking, research and writing.

**Coursework Required for Admission Consideration:** Applicants' files are reviewed for undergraduate coursework in mathematics and/or statistics, social sciences and writing. Applicants who completed prior graduate coursework or earned a graduate or professional degree are expected to submit such documentation as this will be considered in the application review.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA is 3.0.

**Statement of Goals:** In 500 to 1,000 words, address the following questions:

- Why are you pursuing the MPH in Social and Behavioral Sciences, and what are your particular areas of interest in the field?
- What are your future career goals, and what have you done either academically or professionally to guide your interest in public health and to begin preparation toward your career goals?
- Are there any exceptional circumstances related to previous academic performance that you would like the Admissions Committee to consider?

### Standardized Test Scores:

GRE: Optional. While the program takes a portfolio approach to admissions, standardized tests provide important insight into quantitative and verbal abilities. If submitted, scores above the 50th percentile on both the verbal and quantitative sections of the test are desired. Official GRE scores should be sent to SOPHAS using code 0151.

Standardized tests considered in lieu of the GRE include DAT, GMAT, LSAT, MCAT, OAT and PCAT.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** Graduate credits from an MPH program accredited by the Council on Education for Public Health (CEPH) may be transferred into the MPH. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The MPH program director approves the transfer of credits based on a review of course materials provided by the student. The maximum number of credits a student may transfer is 9.

**Clearances:** The MPH program requires students to complete fieldwork education. In the MPH program, it is the fieldwork site that determines the clearances, such as criminal background check and FBI fingerprinting, needed by a student. The results of these clearances determine whether a student may be onboarded at a respective site.



## Program Requirements

### General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 42

Required Courses:

Code	Title	Credit Hours
<b>College Core Course</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Public Health Core Courses</b>		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Social and Behavioral Sciences Core Courses</b>		
SBS 8001	Research Methods in Public Health	3
SBS 8009	Health Psychology	3
SBS 8105	Health Communication	3
<b>Social and Behavioral Sciences Electives <sup>1</sup></b>		<b>9</b>
Select three from the following:		
SBS 5004	Understanding Stress and Change	
SBS 5105	Maternal and Child Health	
SBS 8005	Health Promotion in Vulnerable Populations	
SBS 8006	Addictions and Dependencies	
SBS 8018	Obesity: From Genes to Junk Food	
<b>MPH Fieldwork Experience</b>		
SBS 9289	MPH Fieldwork I	3
SBS 9389	MPH Fieldwork II	3
<b>Total Credit Hours</b>		<b>42</b>

1

Students may select as electives any of the courses listed or, with approval, other graduate courses offered by the College of Public Health.

### On-Campus Full-Time MPH-SBS

Year 1		Credit Hours
Fall		
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
Elective		3
<b>Credit Hours</b>		<b>9</b>
Spring		
SBS 5002	Program Planning, Theory, and Practice	3
SBS 8009	Health Psychology	3
SBS 8105	Health Communication	3
<b>Credit Hours</b>		<b>9</b>

Summer		Credit Hours
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
SBS 5001	Fundamentals of Public Health	3
<b>Credit Hours</b>		<b>9</b>
Year 2		
Fall		
SBS 8001	Research Methods in Public Health	3
SBS 9289	MPH Fieldwork I	3
Elective		3
<b>Credit Hours</b>		<b>9</b>
Spring		
SBS 9389	MPH Fieldwork II	3
Elective		3
<b>Credit Hours</b>		<b>6</b>
<b>Total Credit Hours</b>		<b>42</b>

### Online MPH-SBS

Year 1		Credit Hours
Fall		
SBS 5001	Fundamentals of Public Health	3
SBS 5002	Program Planning, Theory, and Practice	3
<b>Credit Hours</b>		<b>6</b>
Spring		
EPBI 5101	Fundamentals of Epidemiology	3
Elective		3
<b>Credit Hours</b>		<b>6</b>
Summer		
HPM 5006	Political and Economic Aspects of Health	3
Elective		3
<b>Credit Hours</b>		<b>6</b>
Year 2		
Fall		
SBS 8009	Health Psychology	3
SBS 8105	Health Communication	3
<b>Credit Hours</b>		<b>6</b>
Spring		
ENVH 5004	Environmental Health	1.5
EPBI 5006	Biostatistics and Applied Analysis of Health	4.5
<b>Credit Hours</b>		<b>6</b>
Summer		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
<b>Credit Hours</b>		<b>0</b>
Year 3		
Fall		
SBS 8001	Research Methods in Public Health	3
SBS 9289	MPH Fieldwork I	3
<b>Credit Hours</b>		<b>6</b>
Spring		
SBS 9389	MPH Fieldwork II	3

Elective	3
<b>Credit Hours</b>	<b>6</b>
<b>Total Credit Hours</b>	<b>42</b>

**Minimum Grade to be Earned for All Required Courses: B-**

#### **Culminating Events:**

##### *Fieldwork Practicum:*

Students are required to synthesize and integrate the knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice through an internship or practicum experience with a public health agency, health services organization, or under the supervision of a faculty preceptor. The MPH fieldwork experience serves as the applied practice experience as required by the Council on Education for Public Health (CEPH), the accrediting body for schools and programs of public health, for completion of the Master of Public Health degree. In addition, this applied practice experience provides the student with the opportunity to develop expertise in a topic area and to contribute original and independent observations to a body of knowledge.

##### *Evaluative Paper:*

For the applied practice experience to fulfill the requirements of SBS 9289 and SBS 9389, MPH in Social and Behavioral Sciences students are expected to complete a fieldwork experience. The required deliverable for the MPH fieldwork requirement is a final evaluative paper. Students must demonstrate their proficiency and the application of theory and principles in the paper.

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/social-and-behavioral-sciences-mp-hp-sbsc-mp-h>

### **Department Information:**

Dept. of Social and Behavioral Sciences  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-8726

### **Submission Address for Application Materials:**

<https://sophas.liaisoncas.com/>

### **Department Contacts:**

#### *Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *MPH Graduate Program Director:*

Anne S. Frankel, PhD  
anne.frankel@temple.edu  
215-204-9117

#### *Chairperson:*

Stephen Lepore, PhD  
stephen.lepore@temple.edu

215-204-8726

## **Social and Behavioral Sciences PhD**

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Philosophy in Social and Behavioral Sciences.

### **About the Program**

The Department of Social and Behavioral Sciences administers the PhD in Social and Behavioral Sciences (PhD-SBS). This program provides advanced training in theory, methods and research related to social and behavioral influences on population health that prepares students for advanced research and scholarship. The program provides experiences that support interdisciplinary learning; promote critical and theory-based problem-solving skills to address public health threats; and foster the development of professional values and ethics. Heavy emphasis is placed on scientific foundations, research methods and statistics as well as hands-on research experience.

Coursework and experiential learning emphasize the dynamic interaction of individual difference characteristics, social circumstances and situational factors influencing health-promoting and health-damaging behavior and behavior change. Required research courses, structured research experiences each academic term, departmental professional development seminar presentations, and coursework in teaching and grant writing expand students' knowledge and application of research methods and analytic techniques while facilitating professional development and scholarship. Students choose advanced training opportunities in concentration electives in close consultation with a faculty mentor to ensure proper breadth and depth of training in their emerging areas of expertise. Typically, courses in the PhD program are delivered on campus, but some courses may be offered in an online or hybrid format.

Students' active engagement in faculty-mentored scholarly activities outside of coursework is expected throughout program residency. These efforts facilitate students' development of an independent research focus that will lead to their dissertation project, research presentations and scientific journal article submissions. For example, a publishable first-authored paper is required within the first two years of residency (i.e., prior to sitting for the preliminary examinations) to facilitate students' focus on scholarship leading to their culminating dissertation research project.

Many opportunities lie in the Department of Social and Behavioral Sciences for research mentorship with internationally renowned faculty affiliated with dynamic research laboratories and centers, including the Center for Obesity Research and Education, Collaborative on Community Inclusion, Health Behavior and Research Clinic, Health Disparities Research Laboratory, Health Psychology Research Group, Mental Health Services Research Lab, Risk Communication Laboratory, Shared Decision Making Lab, Siminoff Research Group, and Social and Behavioral Health Interventions Laboratory. Collectively, centers and labs in the Department of Social and Behavioral Sciences develop, test and evaluate interventions aimed at resolving significant public health problems in high-risk and vulnerable populations. Examples of research content areas in which department faculty are actively involved include cancer control (e.g., smoking cessation); cancer prevention and

decision-making (e.g., early detection and screening); cancer survivorship (e.g., online and live support groups); ethnic and racial disparities in cancer and obesity; health communication; healthcare decision-making (e.g., genetic testing, organ transplant, vaccinations); health systems research; obesity prevention and treatment; and violence. Research mentors in these labs offer opportunities for research placements and developing papers for publication and presentation at conferences; provide professional socialization; help define dissertation projects using existing funded studies; and may provide some funding in the form of Research Assistantships.

Students in the PhD-SBS program also are expected to actively engage and collaborate within the academic culture of the department and college. This includes participation in the monthly SBS graduate student seminar series, as well as journal clubs, colloquia and brown-bag research presentations.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is preferred.

**Interdisciplinary Study:** Students are encouraged to develop programs of study that are interdisciplinary in nature, involving coursework or scholarly activities across departments, schools and colleges.

**Affiliation(s):** Students are expected to work in close collaboration with their faculty research mentor in the Department of Social and Behavioral Sciences. In addition, students can consider collaborative research projects across affiliated units within the College of Public Health in coordination with their developing line of research and with approval of their research mentor and the PhD Program Director. A list of active research centers can be found on the College of Public Health website at <https://cph.temple.edu/departments-research/research-centers>.

Faculty and doctoral students also are involved in research with affiliates across the University, including the Fox Chase Cancer Center, the Fox School of Business and Management, the Institute on Aging, the Institute on Disabilities, the Lewis Katz School of Medicine, the Lew Klein College of Media and Communication, and the School of Podiatric Medicine. Additional research opportunities at Temple University include the Institute for Survey Research, the Office of Institutional Research and Assessment, and the Social Science Data Library.

**Job Prospects:** Students in the program develop public health content expertise and skills in research, scholarship, teaching and grant writing. Therefore, graduates of the PhD-SBS program are prepared to become faculty members or researchers in colleges and universities or to hold research-related positions in a wide range of organizations, such as agencies promoting community and public health, consulting firms, foundations, healthcare systems, nonprofits and research centers. Graduates are employed in health systems, hospitals and clinics, public health departments, public health and other healthcare and human service agencies, and universities.

**Non-Matriculated Student Policy:** Doctoral coursework is open only to students enrolled in the program.

**Financing Opportunities:** Full-time PhD students generally receive financial support through University fellowships or teaching and research assistantships with department faculty that provide partial to full tuition remission plus a stipend related to hours worked. Typically, University fellowships have provided tuition remission and a stipend for up to

four years of residency. For students without fellowships, funding is not guaranteed, but the majority of our students have secured funding through a combination of teaching assistantships, graduate research assistantships, and scholarship support. Twenty hours per week is considered a full-time assistantship.

*College of Public Health Graduate Assistantships:*

Graduate assistantships are sponsored by the College of Public Health:

- Graduate Research Assistants (RAs) perform supervised research activities. Research assistantships are frequently supported, in part, by a faculty mentor's grant funding for their research. Thus, RA availability can vary from academic year to academic year.
- Teaching Assistants (TAs) support faculty in the teaching of courses, with activities that include grading examinations/papers or teaching occasional lecture sections. Students develop competencies in current pedagogies that prepare them for academic teaching careers.

Consideration for admission with an assistantship requires a description of research and teaching experience; a statement of research and teaching goals; and identification of areas of interest, including identification of potential faculty mentors and articulation of career goals consistent with the mission and purpose of the PhD-SBS program.

Offers of admission are generally accompanied by a fellowship offer or information about assistantship support. Students with full funding from another source (e.g., government funding) are given full consideration in the admission process. The Graduate School website details the types of graduate student support.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 2

Admission into the PhD program is highly competitive. Not only must applicants display an exemplary academic record and potential for scholarship, but their research interests and area of emerging expertise must match those of Graduate Faculty who are available to take a new student. All applicants to the PhD-SBS program must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

All application materials must be received by the deadline in order to be reviewed by the PhD Admissions Committee. Admission is competitive, and students are admitted only once a year. Applications are evaluated together after the deadline has passed. Applications that are completed after the deadline are held for review the following year. An important component of the admissions decision is the fit between the applicant's goals, experiences, and interests and the expertise of the faculty in the PhD program who are designated as "Graduate Faculty" and available to mentor an incoming student.

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from evaluators who can provide insight into the applicant's academic and research experiences and talents, as well as comment on the applicant's aptitude for doctoral-level study and research. Recommendations from college/university faculty members are preferred.

**Coursework Required for Admission Consideration:** Applicants are expected to have completed coursework in the natural, social or

behavioral sciences related to health. Coursework in statistics and research methods is desirable. The following prerequisites, which do not count toward the PhD, must also be satisfied, either through an MPH degree or course equivalency:

Code	Title	Credit Hours
EPBI 5002	Biostatistics	3
EPBI 5101	Fundamentals of Epidemiology	3
HPM 5006	Political and Economic Aspects of Health	3
SBS 5002	Program Planning, Theory, and Practice	3

**Master's Degree in Discipline/Related Discipline:** Nearly all students admitted to the program have a master's degree. Although a master's degree specifically in Public Health is not required, preference is given to applicants who have a background in the health sciences, including behavioral medicine, environmental health, epidemiology, health communication, health psychology, medicine or a public health discipline.

Students accepted without a master's degree are required to complete foundational courses in public health, epidemiology, and biostatistics prior to beginning doctoral coursework.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required, although it need not be in Public Health. Preference is given to applicants who have a background in the health sciences, including behavioral medicine, environmental health, epidemiology, health communication, health psychology, medicine or a public health discipline.

**Statement of Goals:** In no more than 750 words:

- identify the Social and Behavioral Sciences doctorate as the program for which you wish to be considered and why;
- describe important academic and research achievements and interests; and
- specify how your research interests relate to your ultimate career goals and to ongoing work by faculty members affiliated with the PhD-SBS program.

The match between faculty and student interests is important in the admissions decision. Be sure to articulate clearly the linkages among your training goals, the expertise of our faculty, and the training emphasis of the PhD program. For a description of faculty interests and active research, visit the Social and Behavioral Sciences Faculty webpage.

#### Standardized Test Scores:

GRE: Required. The median score of recently admitted applicants is above the 50th percentile on the verbal and quantitative subscales. Official GRE scores should be sent to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current CV required.

**Writing Sample:** Scholarly articles, technical reports or academic papers are preferred. Unless it is a published work (e.g., a book chapter or peer-reviewed journal article), the writing sample should be no more than 10 pages.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Advanced Standing:** A student enrolled in the PhD-SBS program may apply for advanced standing credits for graduate coursework graded "B" or better from an accredited institution. Credits for courses taken as part of a master's degree are considered. Credits for thesis, fieldwork, clinical practice or directed projects/readings cannot be used for advanced standing credit. To be approved for advanced standing, the courses must be deemed appropriate as part of the student's training in the PhD-SBS program. The maximum number of advanced standing credits awarded is 9.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree: 45*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
SBS 8005	Health Promotion in Vulnerable Populations	3
SBS 8009	Health Psychology	3
SBS 8105	Health Communication	3
SBS 8112	Concepts and Methods to Improve Public Health Interventions	3
<b>Research and Statistics Courses</b>		
EPBI 8012	Multivariable Biostatistics <sup>2</sup>	3
EPBI 8201	Structural Equation Modeling <sup>2</sup>	3
EPBI 8212	Grantsmanship in Health Research	3
HRPR 5999	Research Experience in Health Professions <sup>3</sup>	0
SBS 8001	Research Methods in Public Health	3
<b>Electives</b>		
Select five from the following: <sup>4</sup>		15
EPBI 5003	Spatial Analysis in Public Health	

GDC 8003	Research Approaches in Communication, Development and Social Change	
HRPR 8002	Qualitative Methods in Health Outcomes Measurement	
SBS 5105	Maternal and Child Health	
SBS 8006	Addictions and Dependencies	
SBS 8018	Obesity: From Genes to Junk Food	
SBS 9083	Readings and Conference in Public Health <sup>5</sup>	
<b>Research Courses <sup>6</sup></b>		<b>6</b>
SBS 9994	Preliminary Examinations <sup>7</sup>	
SBS 9998	Dissertation Proposal Research	
SBS 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>45</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Students may select an alternate advanced statistics course with the approval of the faculty mentor.

3

Students discuss gaps in their training or areas for scholarship development with their faculty mentor prior to completing the first four academic terms in the program. Based on this planning, students engage in a project with a research mentor, as approved by the Director of Graduate Studies.

4

With approval from the faculty mentor or PhD Program Director, students may select alternate electives from within the College and across the University. Advising helps students coordinate courses for additional methods training or to satisfy requirements for available certificates, such as the Interdisciplinary Health Communication graduate certificate.

5

If selected, SBS 9083 must be taken for 3 credits.

6

The Graduate School requires that students complete a minimum of 6 credits that include SBS 9994, SBS 9998, and SBS 9999. Of the 6 credits, at least 2 credits must be earned in SBS 9999.

7

Prior to enrolling in SBS 9994, a paper requirement must be fulfilled by the student who, under the advisement of the primary mentor, submits for review a publishable research article to a peer-reviewed journal.

#### Minimum Grade to be Earned for All Required Courses: B-

#### Culminating Events:

##### Area Paper:

Prior to sitting for the preliminary examinations, students must have successfully published or written a publishable paper in their chosen area of research interest. The purpose of the paper requirement is to demonstrate critical and interpretive knowledge in specialized areas of one's chosen program, as well as a high proficiency in written communication and a capacity to contribute to generalizable knowledge in the field. The student must be the lead or sole author. For students who enter the program without already having published a first-authored,

peer-reviewed article, they typically initiate efforts toward this requirement during their first term of residency.

A student cannot advance to the preliminary examinations without passing the paper requirement. Failure to satisfactorily complete the area paper requirement within the specified time frame can result in dismissal from the PhD program. Students who are entering the PhD program and have already published a peer-reviewed paper related to their programmatic subdiscipline can request to waive this requirement by completing a waiver application and submitting it along with the published document to the Director of Graduate Studies.

#### Preliminary Examinations:

Students typically take their preliminary examinations during their third year of residency in the program, after completing the paper requirement. All students are required to take the preliminary examinations prior to completing and defending their dissertation research proposal. The exams should be taken within one term of completing all coursework. Students are required to meet with their mentor and Director of Graduate Studies before the beginning of the term in which they plan to take the examinations to establish eligibility.

The preliminary examinations are designed to test fundamental core competencies of the students' training. The student must register for 1 credit of SBS 9994 in the term in which the examinations are taken. To register for SBS 9994, the student must have completed all coursework or be enrolled in final courses in the term in which the examinations are taken. Note that all Incomplete and/or "NR" grades must have been removed, and the area paper requirement must have been satisfied. Special authorization is required to register.

The preliminary examinations consist of the following components:

- A comprehensive one-week take-home written examination, with an emphasis on the student's concentration, about the scientific foundations as well as social and behavioral sciences underpinnings of public health; and
- A methods exam, which is a four-hour in-class examination on research methods and statistics.

Students who fail these exams may have one opportunity to take the examinations again. A second failure results in automatic dismissal from the PhD program.

#### Dissertation Proposal:

After passing the preliminary examinations, students may enroll in SBS 9998. Students must be enrolled for 1 credit of SBS 9998 each term until they file their dissertation proposal with the Graduate School.

All students must form a Doctoral Advisory Committee (DAC) with the approval of the Director of Graduate Studies. The DAC is composed of at least three Graduate Faculty members: two members, including the chair, must be from the PhD program faculty of the Department of Social and Behavioral Sciences. The DAC Chair must be approved as Doctoral Graduate Faculty by the Dean of the College of Public Health and by the Graduate School. The chair is responsible for overseeing and guiding the student's progress; coordinating the responses of the Committee members; and informing the student and the Director of Graduate Studies annually of the student's academic progress. A fourth, external reader is also required at the time of the final dissertation defense. This person must be a member of the Graduate Faculty at Temple or approved by the Dean of the College to take part in the final dissertation examination.

This fourth member is not required to be present at the defense of the proposal.

To fulfill the requirements of SBS 9998, students must submit a dissertation proposal, successfully defend it orally before their Committee, apply for Institutional Review Board (IRB) approval for the proposed research, and submit the proposal to the Graduate School. Students have a maximum of one year from the time of completing their preliminary examinations to develop and defend their dissertation proposal. Thus, students may enroll in SBS 9998 for only two terms without permission. Students needing more time may, with the support of their mentor, formally petition the Director of Graduate Studies for an extension, although an extension is not guaranteed. Failure to meet these requirements can result in dismissal from the program.

*Dissertation:*

The doctoral dissertation is an original theory-based research study that makes a significant contribution to the field of Public Health. It should expand existing knowledge and demonstrate the student's mastery of theory and research methods, particularly within a concentration or specialty area. The research should be rigorous, while upholding the ethics and standards of the field. Students are expected to submit their dissertation study for publication and presentation to professional audiences.

To fulfill the dissertation requirement, students must prepare and orally defend the final dissertation in a public meeting. Students should present their plans for publishing their dissertation as part of their defense. Students must be enrolled continuously in SBS 9999 until their dissertation is successfully defended. The Graduate School requires a minimum of 2 credits of SBS 9999. Students must be enrolled in the course in the term that they graduate.

The Dissertation Examining Committee (DEC) consists of the DAC plus at least one additional external reviewer. The external reviewer must be doctorally prepared. If this person is not a member of the Temple University Graduate Faculty, they must be approved by the Director of Graduate Studies, the Dean of the College, and the Graduate School to take part in the final dissertation examination. The DEC evaluates the student's written dissertation and oral defense, including the student's ability to articulate orally the research question; methodological approach; primary findings; interpretation of the findings; and implications for theory, research and practice. The DEC votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of a committee, the new member must be approved by the Director of Graduate Studies and registered with the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their DEC and work with their department's administrative assistant to secure a room. This should be done at least one month in advance of the proposed date. The administrative assistant arranges the time, date and room within two working days. After the time, date and room are secured, the student must send to the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms." This must be submitted at least 10 working days before the defense. The Department of Social and Behavioral Sciences posts flyers announcing the defense, and the Graduate School lists the defense on its website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/social-and-behavioral-sciences-phd-hp-sbsc-phd>

### Department Information:

Dept. of Social and Behavioral Sciences  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

### Department Contacts:

*Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*PhD Program Director:*

Anne S. Frankel, PhD  
anne.frankel@temple.edu  
215-204-9117

*Chairperson:*

Stephen Lepore, PhD  
stephen.lepore@temple.edu  
215-204-8726

## Social Work MSW

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Social Work.

### About the Program

The School of Social Work is dedicated to the pursuit of societal transformations that eliminate social, political and economic injustices for systemically and structurally oppressed and marginalized populations and advance the quality of life for all through:

- education emphasizing the discovery of knowledge, use of critical inquiry, and application of professional ethics to effect social change among social workers in front-line, supervisory, managerial and leadership positions;
- research and scholarship that advances applied knowledge and generates evidence-based strategies to resolve problems between people and their social environments at the local, state, national and global levels;
- public service that aids in the dissemination of knowledge and evidence-based strategies;
- collaborations and partnerships with communities, agencies and organizations in response to the needs of constituents; and

- trauma-informed modalities used to support mental, physical, physiological, social and overall wellness of individuals and communities.

Flexible programming is offered for the MSW and includes:

**Regular Entry** — Applicants with a bachelor's degree may apply for the 60-credit MSW degree, which has been accredited by the Council on Social Work Education (CSWE):

- Full-time students pursue a degree (15 credits per term) for 2 years, excluding summers. Admission for full-time study is in the Fall term only.
- Part-time students pursue their degree (6 then 9 credits per term) over a 3-year period, including summers. Admission for part-time study is in the Fall and Spring terms.

**Advanced Standing** — Applicants must have earned a BSW degree within the last 5 years from a CSWE-accredited school of social work and be selected for advanced standing status:

- Full-time students begin in Summer I and finish in 12 months, taking 4.5 credits during the Summer term and 15 credits, per term, in the Fall and Spring terms.
- Part-time students begin in Summer I and finish in 18 months, taking 6 or 9 credits in their first Fall, Spring, Summer and final Fall terms. Admission is in the Summer term only.

Students who are accepted for Advanced Standing have 25.5 credits from the BSW program applied to the MSW program. They fulfill the requirements for the 60-credit MSW program by completing 34.5 credits in Temple University's CSWE-accredited MSW program.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main (full- and part-time) and Online (part-time). Most courses are offered in an in-person format for campus-based students, although to increase choice, some courses are offered only in an online format.

**Full-Time/Part-Time Status:** Course times are structured to offer a broad range of flexible options for students, many of whom are employed while engaged in their program of study at Temple. Students who are employed full-time are strongly advised to pursue the part-time program.

**Interdisciplinary Study:** The College of Public Health offers a dual master's degree in Social Work and Public Health. The MSW can be undertaken with any of these MPH programs:

- Applied Biostatistics
- Environmental Health
- Epidemiology
- Health Policy and Management
- Nutrition
- Social and Behavioral Sciences

Interested applicants complete one application that is reviewed by both Social Work and Public Health faculty for admissions consideration.

In partnership with the Beasley School of Law, the School of Social Work offers a dual degree JD-MSW program. Interested applicants apply to the JD and MSW programs separately. In each application, students note their interest in the dual degree JD-MSW program. The first year

of coursework is composed entirely of JD courses. The second through fourth years of coursework include a mixture of JD and MSW classes.

Interested applicants can find additional information at <https://www.temple.edu/academics/dual-degree-programs>.

The School of Social Work is currently working to provide additional dual degree options for students.

**Study Abroad:** Students are permitted to complete up to 6 credits in elective courses abroad. They should consult with their advisor about the timing of degree requirements.

**Ranking:** The School of Social Work at Temple University's College of Public Health is ranked No. 46 among the nation's schools and programs of social work in the 2023 edition of *U.S. News & World Report*, climbing 13 spots since the previous ranking. With 298 schools and programs ranked, Temple University's School of Social Work is in the top 20% nationwide.

**Accreditation:** The MSW degree program is accredited by the Council on Social Work Education (CSWE).

**Areas of Specialization:** Faculty are engaged in a number of research and service projects pertaining to child welfare, family and community violence, gender identity and sexual orientation, HIV-AIDS, homelessness, intimate partner violence (IPV), involvement of fathers in families, mental and physical health, obesity, older adults, people with disabilities, political social work, poverty, racial equity and inclusion, organizational change theories, multiracial identity development, rural community engagement, social capital development, and substance use and recovery.

**Job Prospects:** Graduates of the MSW program find employment in public and private social service agencies, as well as in profit and nonprofit organizations. Their work encompasses a broad range of responsibilities, including community organizing, counseling, management, program design and implementation, supervision and training. Graduates are also employed in many different fields of practice, such as adoption support, aging, child protection, community organizing, criminal justice, developmental disabilities, employment-based social work, HIV/AIDS, hospice care, medical social work, mental health counseling, political social work, school social work and substance use.

**Licensure/Certification:** States vary in their requirements for a license to practice social work, with many also offering different levels of licensing. Certain jobs in the field of social work require licensing. Graduates should contact their local chapter of the National Association of Social Workers (NASW) and their advisor for information on the specific requirements for licensing in their state.

The Association of Social Work Boards (ASWB) administers a licensure examination that is required to practice as a licensed social worker with an MSW in the following states: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming. For more information about state licensure, visit <https://www.aswb.org/licenses/how-to-get-a-license/>.

Because Temple University's Master of Social Work program is accredited by the Council on Social Work Education (CSWE), completion of Temple University's MSW program qualifies students to sit for the ASWB licensure examination.

**Non-Matriculated Student Policy:** Students must apply for admission to the MSW program and be offered the non-matriculated student option. This option is for students who are ultimately seeking the MSW but do not fully meet the admissions requirements.

**Financing Opportunities:** The School of Social Work awards some aid each year to assist meritorious applicants and continuing students in meeting the cost of their educational program. Awards include partial scholarships and stipends provided by local public and voluntary agencies. Awards are made on the basis of academic merit and the overall promise shown by an applicant for contributing to the School and to the profession. Additional considerations include interest in particular areas of practice and the School's commitment to maintaining diversity in the student body. Some awards are granted at program admission, while others are designed to support our advanced year, continuing students.

Awards made by the School of Social Work ordinarily meet only part of the student's total educational expenses. All students are, therefore, expected to make use of other resources as well as federal grant, loan and work-study assistance to help meet the cost of their education. Temple University's Office of Student Financial Services provides assistance with the federal grant/loan/work-study application process.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Regular Entry Admission:* March 1

Early application is encouraged. The School of Social Work has a limited number of scholarships to award, and these scholarships are awarded on a rolling basis.

*Spring Regular Entry Admission:* November 1

*Summer Advanced Standing Admission:* April 1

Early application is encouraged. The School of Social Work has a limited number of scholarships to award, and these scholarships are awarded on a rolling basis. Students who are completing BSW coursework are encouraged to apply in January after their Fall grades have posted to their transcript.

All applicants to the MSW program must apply via the Sophas Express System at <https://sophasexpress.liasoncas.com/applicant-ux/>. Admission to Temple's MSW program is competitive, so applicants are advised to apply early and to ensure that all supporting documents are received by the Sophas Express System before the deadline.

### Letters of Reference:

*Number Required:* 3, with submission made at SOPHAS Express

*From Whom:* For regular entry, letters of recommendation should be obtained from faculty and professionals familiar with the applicant's academic competence and/or professional work experience. Applicants who have graduated from college within the last five years should submit at least one reference from a professor or an official of the degree-granting institution. Those with employment experience in the social services or a related field should submit at least one reference from a supervisor or administrator at their place of employment.

If seeking advanced standing, applicants should obtain three references, one of which should be prepared by the BSW Program Director, Senior Practice Seminar Course Instructor, Field Instructor or Field Coordinator. The letter should indicate the applicant's readiness for advanced standing.

**Coursework Required for Admission Consideration:** Social Work education draws heavily from the rich and broad foundation provided by a liberal arts curriculum. All applicants are expected to have completed an undergraduate course of study reflecting this liberal arts foundation.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of an accredited baccalaureate degree. The minimum acceptable undergraduate GPA for regular entry applicants is 3.0 on a 4.0 scale or 3.5 in the last 2 years of study (i.e., 60 credits of the bachelor's degree). In addition, an applicant who has completed at least 9 credits of graduate coursework with a cumulative GPA of 3.25 may be considered for admission.

A bachelor's degree in Social Work (BSW) is required for Advanced Standing applicants. Applicants for advanced standing must have achieved an undergraduate GPA of 3.25 in all undergraduate coursework and at least 3.25 in their junior/senior years. For detailed information, visit <https://cph.temple.edu/ssa/degrees-offered-master-social-work/msw-admissions>.

**Statement of Goals:** A statement of professional plans and goals is an important component of the admissions application in Social Work. It provides an opportunity for applicants to show their motivation for pursuing graduate study in the field of Social Work, relevant personal and professional experiences, and knowledge of diversity and social justice. This essay is evaluated on the basis of the applicant's ability to reflect on and summarize significant and relevant experiences, to conceptualize and think critically, and to write proficiently. Please respond to the specific question prompts listed on SOPHAS Express. All applicants should submit their essay at SOPHAS Express.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current professional resume required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are



reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Advanced Standing:** Applicants from a BSW program accredited by the Council on Social Work Education (CSWE) may be eligible for advanced standing. This enables students, after a required summer critical thinking course that begins in June, to start the second year of study at the advanced curriculum level. To be considered for advanced standing, students must, in addition to meeting minimum requirements, have:

- earned the BSW no more than five years prior to applying;
- achieved an overall undergraduate GPA of 3.25, in addition to a 3.25 GPA in their junior and senior years; and
- received no more than one "C" grade in Social Work courses; that is, all other Social Work grades must be "B" or better.

Applicants for advanced standing must also submit:

- Three references, preferably one from the Senior Practice Seminar Course Instructor, one from the applicant's Field Instructor for the senior practicum, and the third from the BSW Program Director or another academic source.
- A copy of the Field Instructor's evaluation form from the undergraduate placement.

Students who have completed their foundation year at another graduate school of social work may also be eligible to transfer in their foundation year credits if they meet the criteria.

**Clearances:** The Social Work MSW program requires students to complete clinical/field education experiences at facilities both on and off Temple University's campuses. These placements require criminal background checks, Act 33/34 clearances, and perhaps a drug screen. Placements may also require the student to maintain personal health insurance. The results of these requirements may limit and potentially eliminate placement options for the student, thus resulting in their inability to meet graduation requirements. Additionally, conviction of a misdemeanor, felony, or felonious or illegal act may prevent the student from becoming credentialed and/or licensed to practice social work.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 60, including 30 in foundation coursework and 30 in advanced-level study

#### Required Courses:

Students are exposed to multiple methods of intervention through foundation coursework. The courses are generalist in nature, allowing students to become familiar with the breadth of social work. Courses cover content in social justice, social welfare policy, research methods, human behavior in the social environment, and social work practice.

Students then select from a range of advanced-level coursework that allows them to examine in greater depth a practice modality, i.e., a concentration. Each concentration requires 9 credits of practice/program evaluation courses and an advanced field placement. Two concentrations are offered:

- Clinical Practice
- Macro Practice

Code	Title	Credit Hours
<b>Foundation Courses</b> <sup>1</sup>		
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>2</sup>	0
SSWG 5003	Foundations in Social Work Research	3
SSWG 5005	Social Welfare Policies and Services I	3
SSWG 5006	Social Welfare Policies and Services II	3
SSWG 5007	Deconstructing White Supremacy in Social Work	3
SSWG 5101	Theory-Informed Direct Practice I: Individuals, Families, and Groups	3
SSWG 5102	Theory-Informed Direct Practice II: Individuals, Families, and Groups	3
SSWG 5103	Theory-Informed Macro Practice I: Groups, Organizations, and Communities	3
SSWG 5104	Theory-Informed Macro Practice II: Groups, Organizations, and Communities	3
SSWG 5187	Foundation Field Practicum I	3
SSWG 5188	Foundation Field Practicum II	3
<b>Advanced Courses</b> <sup>3</sup>		
SSWG 8505	Advanced Social Justice: Anti-Oppressive Social Work	3
Select one advanced policy course from the following: <sup>4</sup>		3
SSWG 8307	Health/Mental Health Policy	
SSWG 8407	Policy on Families and Children	
SSWG 8607	Advanced Policy - Gender and Sexuality	
Select courses for one concentration from the following:		9
Clinical Practice Concentration, which requires these three 3-credit courses:		
SSWG 8101	Clinical Practice with Individuals, Families, and Groups I	
SSWG 8102	Clinical Practice with Individuals, Families, and Groups II	
SSWG 8205	Evaluation of Clinical Practice	
Macro Concentration, which requires these two 3-credit courses and a choice of three 1-credit practice courses:		
SSWG 8107	Macro Practice in Organizational, Community and Policy Arenas	
SSWG 8207	Social Work Research: Communities and Policy Arenas and Management/Planning	
Choose three of the following 1-credit Macro practice courses:		
SSWG 8108		
SSWG 8109	Social Innovation and Entrepreneurship	
SSWG 8111	Legislative Advocacy	
SSWG 8112	Coalitions and Partnerships	
SSWG 8113	Resource and Grant Development for Human Services	
SSWG 8114	Supervision, Staff Management, and Staff Development in Human Service Organizations	
SSWG 8115	Leadership in Human Service and Social Change Organizations	
SSWG 8116	Grassroots Mobilization: In the US and Internationally	
<b>Electives</b> <sup>5</sup>		<b>9</b>
<b>Field Practica</b>		

SSWG 8187	Advanced Field Practicum I	3
SSWG 8188	Advanced Field Practicum II	3
<b>Total Credit Hours</b>		<b>60</b>

1

During the first week of the term of their initial entry into the MSW program, all incoming regular entry students have the opportunity to complete a test-out exam for the following courses: SSWG 5003, SSWG 5005, and SSWG 5006. Students who earn a score of 80% or higher on a test-out exam are not required to complete the associated required course, but are required to successfully complete 3 credits of electives in place of each required course. That is to say, all regular entry MSW students are required to successfully complete 60 credits of coursework, even if they test out of any required course(s), to earn the degree.

2

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

3

Unless transfer credits fulfill them, 30 credits of advanced-level courses are required. A portion of these 30 credits are earned in the advanced field practicum experiences described under "Internship" below.

4

With advanced review and approval from the MSW Program Director, students may take an advanced policy course outside of the School of Social Work.

5

With advanced review and approval from the MSW Program Director, students may take electives outside of the School of Social Work and/or independent study courses to fulfill the electives requirement.

**Minimum Grade to be Earned for All Required Courses: B-**

### **Culminating Event:**

#### *Internship:*

Two internships are required in the form of a field practicum, which is an essential part of Social Work studies and is deliberately linked in an integral way with classroom learning. The practicum occurs concurrently with Social Work practice courses or can be taken as a block placement in the Summer sessions. (At this time, block placements are available only to campus-based students, not online students.) In order to ensure a quality learning experience for students, the Office of Field Education is responsible for working with students to arrange and oversee field practica. Students employed in social service settings may undertake their practica at their place of employment, but field placement activities must be substantially different than job duties. Because of accreditation and MSW curriculum requirements, students must have appropriate learning experiences and supervision; therefore, they should plan on allocating at least one full day during the regular work week to the practica.

The first field practicum, taken as part of the foundation curriculum, focuses on developing proficiency in generalist practice/basic Social Work skills. This includes learning to engage and assess a range of clients, including individuals, families, groups, organizations and communities. Students learn to identify issues, needs, resources and strengths. They also acquire skills in planning, communication, supervision and consultation as well as intervention, cultural competence,

evidence-based practice and evaluation. This two-term practicum requires a minimum of 450 hours (usually 2.5 days per week).

With the second field practicum, taken as part of the advanced curriculum, students develop expertise in their chosen concentration. This practicum allows for in-depth development of skills and application of theory and concepts, exploration of ethical challenges, and continued cultural competency. This two-term practicum requires a minimum of 600 hours (usually three days per week).

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/master-of-social-work-msw-sw-sswg-msw>

### **School of Social Work Information:**

School of Social Work  
Ritter Hall Annex, 5th Floor  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
cph@temple.edu  
215-204-8623

### **Submission Address for Application Materials:**

<https://sophasexpress.liaisoncas.com/>

### **Department Contacts:**

#### *Recruitment and Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

#### *Field Education Coordinator:*

Valarie Clemmons, MSW  
v.clemmons@temple.edu  
215-204-1222

#### *MSW Program Director:*

Ashley E. Stewart, PhD  
Assistant Professor of Instruction  
aestewart@temple.edu  
215-204-8623

#### *Coordinator of Online MSW Program:*

Ashley E. Stewart, PhD  
Assistant Professor of Instruction  
aestewart@temple.edu  
215-204-8623

## **Speech, Language and Hearing Science MA**

COLLEGE OF PUBLIC HEALTH

Learn more about the Master of Arts in Speech, Language and Hearing Science.

## About the Program

The MA program in Speech, Language and Hearing Science (MA-SLH) is committed to the education of high-quality clinical professionals who work creatively with the broadest possible range of populations, settings and speech-language-swallowing disorders. The program provides students with a rich variety of supervised clinical experiences at its own Temple University Speech-Language-Hearing Center (TUSLHC) on Main campus and at more than 80 field affiliate settings throughout the Delaware Valley. In addition, the Department of Communication Sciences and Disorders maintains strong connections with faculty members and practitioners at Temple University Health System and other departments in the College of Public Health. Graduates of the program have consistently gone on to significant careers throughout the United States and abroad. Opportunities exist for pursuing research interests under faculty guidance through independent study courses or the writing of a master's thesis.

**Time Limit for Degree Completion:** 2 years (six terms, including required enrollment in two summer sessions) with a bachelor's degree in Communication Sciences and Disorders; 3 years (eight or nine terms, including required enrollment in two or three summer sessions) without a bachelor's degree in Communication Sciences and Disorders

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through full-time enrollment.

**Interdisciplinary Study:** The faculty itself is interdisciplinary with representation from Audiology, Cognitive and Neuropsychology, Linguistics, Speech Motor Control and Speech-Language Pathology. A proseminar presentation series includes speakers from within and outside the Department of Communication Sciences and Disorders and Temple University.

**Affiliation(s):** The program has research collaborations with the following:

- Åbo Akademi University (Finland)
- Boston Children's Hospital
- Boston University
- British Columbia Early Hearing Program
- Children's Hospital of Philadelphia
- The College of New Jersey
- Ewha Womans University (South Korea)
- Gallaudet University
- International Christian University (Japan)
- Johns Hopkins University
- Kansas Language Assessment Program
- Marquette University
- Maternity Care Coalition
- Moss Rehabilitation Research Institute
- Newcastle University (United Kingdom)
- Northeastern University
- Northwestern University
- Portland State University
- Purdue University
- Rutgers University - Camden
- Syracuse University

- Temple University Hospital
- University of Barcelona
- University of California - Irvine
- University of Connecticut
- University of North Carolina
- University of Oregon
- University of Pennsylvania
- The University of Sydney (Australia)
- University of Tartu (Estonia)
- University of Wisconsin – Madison
- Vanderbilt University
- Washington University in St. Louis

The tri-state area around Philadelphia offers a culturally diverse setting with urban, suburban and even rural areas, affording a variety of opportunities for students to engage in clinical practice in over 80 affiliated clinical sites that include schools, preschools, acute care and rehabilitation hospitals, skilled nursing facilities, private practice and early intervention agencies.

**Ranking:** In 2020, according to *U.S. News & World Report*, Temple University's Speech, Language and Hearing Science program ranks 25 out of 261 ASHA-certified programs.

**Accreditation:** The MA in Speech, Language and Hearing Science program at Temple University is accredited by the Council on Academic Accreditation in Audiology and Speech Language Pathology (CAA) of the American Speech-Language-Hearing Association, 2200 Research Boulevard #310, Rockville, Maryland 20850, 800-498-2071 or 301-296-5700.

**Areas of Specialization:** Students completing the master's program are generalists with expertise in a wide variety of disorders and population types. Courses and supervised diagnostic and therapeutic experiences involve both children and adults, and encompass a range of disorders, including dysfluency, dysphagia, hearing disorders, language disorders, motor speech disorders, phonological disorders and voice disorders. Faculty conduct supervised research in such areas as language disorders in monolingual and bilingual children, motor speech disorders, adult aphasia and dementia, voice disorders, communication in aging individuals, and hearing.

**Job Prospects:** Graduates are employed in hospitals, rehabilitation centers, schools, private practices and universities.

**Licensure/Certification:** The Certificate of Clinical Competence (CCC) validates and provides assurance to consumers and clients, other healthcare professionals, employers, state licensure boards and third-party payers that they can be confident certificate holders, through participation in continuous professional development activities, are keeping up with rapid changes in the profession's scopes of practice. To complete the process for the Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP) from the Council for Clinical Certification in Audiology and Speech-Language Pathology (CFCC) of the American Speech-Language-Hearing Association, graduates must pass the national *Praxis*® examination in Speech-Language Pathology (5331) and must complete a Clinical Fellow experience after graduation.

Graduates of the program are eligible to apply for the Instructional I Certificate through the Pennsylvania Department of Education upon successful completion of the *Praxis*® examination in Speech-Language Pathology (5331) and the *Praxis*® Fundamental Subjects: Content

Knowledge (5511) examination. Additional state-mandated requirements may apply for graduates employed in the public schools in states other than Pennsylvania. Each state has its own licensing procedures in addition to those of the CCC-SLP. For more information, visit <https://www.asha.org/advocacy/state/>.

**Non-Matriculated Student Policy:** Non-matriculated students must have departmental permission to enroll in graduate courses. No more than 6 credits of Temple University graduate coursework with an earned grade of "B" or higher taken as a non-matriculated student may be counted toward the degree. In order to enroll in courses as a non-matriculated student, individuals must supply the Department of Communication Sciences and Disorders with an official transcript from their undergraduate institution and syllabi from the courses that satisfy the prerequisite requirements for the graduate-level courses the student is requesting to take. A grade of "B-" or better must have been attained in the prerequisite classes, and an overall undergraduate GPA greater than 3.0 must have been earned. If these requirements are met, non-matriculated students, with the department's permission, are permitted to take up to three of the following four courses:

Code	Title	Credit Hours
CSCD 5521	Foundations in Child Language Disorders (Fall)	3
CSCD 5522	Foundations and Management in Phonological Disorders (Fall)	3
CSCD 5525	Foundations and Management in Fluency (Summer)	3
CSCD 8726	Management of Child Language Disorders (Spring)	3

For more information, contact Lauren Burrows ([lauren.burrows@temple.edu](mailto:lauren.burrows@temple.edu)).

**Financing Opportunities:** For information on financial aid, please contact the Office of Student Financial Services.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15

All applicants to the MA program in Speech, Language and Hearing Science must apply via the Communication Sciences and Disorders Centralized Application Service (CSDCAS) by January 15. The system can be accessed at <https://csdcas.liasoncas.com/>.

### Letters of Reference:

*Number Required:* 3

*From Whom:* Recommendations should be obtained from college instructors, clinical supervisors, or others who can speak to the applicant's academic or clinical abilities and personal integrity. Two of the recommendations must be academic in nature.

**Coursework Required for Admission Consideration:** Prerequisite courses taken as an undergraduate or prior to matriculation to the MA-SLH program require a grade of "C" or higher (not "C-"). Students need to retake prerequisite courses if completed more than 10 years prior to matriculation. Any prerequisite courses not completed prior to matriculation must be completed at Temple University with an earned grade of "B-" or higher. Prerequisites to graduate study may also be taken during the first year of graduate study, with an earned grade of "B-"

or higher, if not completed previously. These include the following subject areas:

- Anatomy and Physiology of Speech and Hearing Mechanisms
- Audiology
- Aural Rehabilitation
- Clinical Methods (i.e., Diagnostics and Treatment in Speech-Language Pathology)
- Hearing Science
- Human Neuroscience
- Phonetics
- Psycholinguistics (or Introduction to Linguistics or Introduction to Syntax)
- Speech and Language Development
- Speech Science

The American Speech-Language-Hearing Association (ASHA) requires coursework in the following content areas: behavioral and social sciences, biological sciences, physical sciences (i.e., physics or chemistry), and statistics. ASHA-required content area courses taken as an undergraduate or prior to matriculation to the MA-SLH program require a grade of "C" or higher (not "C-"). Any ASHA-required content area coursework not completed prior to matriculation requires an earned grade of "B-" or higher. All prerequisite coursework is subject to review upon matriculation to the MA-SLH program.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** One writing sample is required. It should address your goals and the prompts outlined on the CSDCAS application.

### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

**Transfer Credit:** On the recommendation of the student's advisor, the Department of Communication Sciences and Disorders may accept transfer of graduate credits from an accredited institution. Grades must be "B" or better. The maximum number of credits a student may transfer is 6.

**Clearances:** The Speech, Language and Hearing Science MA program requires students to complete clinical/field education experiences at facilities both on and off Temple University's campuses. These placements require medical clearances, criminal background checks, Act 33/34 clearances (for working with children and vulnerable populations), and often a drug screen and CPR certification. The results of these requirements may limit and potentially eliminate placement options for the student, thus resulting in their inability to meet graduation requirements. Additionally, conviction of a misdemeanor, felony, or felonious or illegal act may prevent the student from becoming credentialed and/or licensed to practice as a Speech Language Pathologist.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 54-59, including 39 credits of academic coursework and 15-20 credits of clinical coursework

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CSCD 5521	Foundations in Child Language Disorders	3
CSCD 5522	Foundations and Management in Phonological Disorders	3
CSCD 5524	Foundations and Management of Motor Speech Disorders	3
CSCD 5525	Foundations and Management in Fluency	3
CSCD 5527	Foundations and Rehabilitation of Language and Cognitive Disorders in Aphasia	3
CSCD 5528	Voice Disorders: Theory and Analysis	3
CSCD 5531	Applications in Audiology	1
CSCD 5546	Research Methods in Communication Sciences and Disorders (Research Methods in Communication Sciences)	3
CSCD 8722	Foundations and Management in Dysphagia	3
CSCD 8726	Management of Child Language Disorders	3
CSCD 8727	Written Language Development and Disorders	2
CSCD 8729	Neurocognitive Language Disorders	3
CSCD 8824	Assessment and Treatment of Diverse Populations	2
CSCD 8830	Seminar In CSD	1
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>1</sup>	0
<b>Elective<sup>2</sup></b>		<b>3</b>
<b>Clinical Practicum<sup>3</sup></b>		<b>15-20</b>
CSCD 8147	Basic Practicum in Audiology	
CSCD 8187	Basic Practicum in Diagnostic Processes	
CSCD 8287	Basic Practicum in Therapy Processes	
CSCD 9187	Advanced Practicum in Voice	
CSCD 9287	Advanced Practicum in Fluency	

CSCD 9387	Advanced Field Practicum in Speech Language Pathology - Child
CSCD 9388	Capstone Field Practicum in Speech Language Pathology - Pediatric
CSCD 9487	Advanced Field Practicum in Speech Language Pathology - Adult
CSCD 9488	Capstone Field Practicum in Speech Language Pathology - Adult
CSCD 9587	Advanced Practicum in Aphasia
<b>Total Credit Hours</b>	<b>54-59</b>

1

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

2

Students who elect to complete a thesis should select CSCD 9996 Thesis Seminar as their elective.

3

Students enroll in 18 to 20 credits of supervised clinical practicum in the evaluation and treatment of speech, language, and swallowing disorders to achieve the Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP) in accordance with the standards of the American Speech-Language-Hearing Association (ASHA). Up to 3 credits may be waived if students have achieved the full range of required competencies and experiences.

## Proposed Plan of Study Outlined by Year and Term

Year 1		
Fall		Credit Hours
CSCD 5521	Foundations in Child Language Disorders	3
CSCD 5522	Foundations and Management in Phonological Disorders	3
CSCD 5527	Foundations and Rehabilitation of Language and Cognitive Disorders in Aphasia	3
CSCD 5531	Applications in Audiology	1
CSCD 8187	Basic Practicum in Diagnostic Processes <sup>1</sup>	1
CSCD 8287	Basic Practicum in Therapy Processes <sup>1</sup>	1
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions <sup>2</sup>	0
<b>Credit Hours</b>		<b>12</b>
Spring		
CSCD 5528	Voice Disorders: Theory and Analysis	3
CSCD 5546	Research Methods in Communication Sciences and Disorders (Research Methods in Communication Sciences)	3
CSCD 8187	Basic Practicum in Diagnostic Processes <sup>1</sup>	1
CSCD 8287	Basic Practicum in Therapy Processes <sup>1</sup>	2
CSCD 8726	Management of Child Language Disorders	3
<b>Credit Hours</b>		<b>12</b>
Summer		
CSCD 5525	Foundations and Management in Fluency	3

CSCD 8187	Basic Practicum in Diagnostic Processes <sup>1</sup>	1
CSCD 8722	Foundations and Management in Dysphagia	3
CSCD 9587	Advanced Practicum in Aphasia	2
<b>Credit Hours</b>		<b>9</b>
<b>Year 2</b>		
<b>Fall</b>		
CSCD 5524	Foundations and Management of Motor Speech Disorders	3
CSCD 8727	Written Language Development and Disorders	2
CSCD 8830	Seminar In CSD	1
CSCD 9287	Advanced Practicum in Fluency	1
CSCD 9387	Advanced Field Practicum in Speech Language Pathology - Child	3
<b>Credit Hours</b>		<b>10</b>
<b>Spring</b>		
CSCD 8729	Neurocognitive Language Disorders	3
CSCD 8824	Assessment and Treatment of Diverse Populations	2
CSCD 9187	Advanced Practicum in Voice	1
CSCD 9387	Advanced Field Practicum in Speech Language Pathology - Child	3
Elective <sup>3</sup>		3
<b>Credit Hours</b>		<b>12</b>
<b>Summer</b>		
CSCD 8147	Basic Practicum in Audiology	1
Select one Field Practicum in Speech Language Pathology (Pediatric or Adult) course from the following:		3
CSCD 9388	Capstone Field Practicum in Speech Language Pathology - Pediatric	
CSCD 9487	Advanced Field Practicum in Speech Language Pathology - Adult	
CSCD 9488	Capstone Field Practicum in Speech Language Pathology - Adult	
<b>Credit Hours</b>		<b>4</b>
<b>Total Credit Hours</b>		<b>59</b>

1

Students typically enroll in CSCD 8187 and CSCD 8287 over multiple academic terms in Year 1.

2

This common College Core course is required of all incoming graduate students in the College of Public Health. It is available completely online and designed such that students can complete the modules at their own pace over the course of their degree program.

3

Students who elect to complete a thesis should select CSCD 9996 Thesis Seminar as their elective.

**Minimum Grade to be Earned for All Required Courses: B-**

**Standards of Scholarship:** A graduate student in the MA program is expected to perform in accordance with the standards of scholarship of the Temple University Graduate School and of the Department of Communication Sciences and Disorders, including the following:

1. At the time of graduation, the student must have a grade point average of at least 3.0 (equivalent at Temple to the grade of "B").

2. The student's grades will be averaged after the student has completed 15 graduate credits. Unless their average is "B" or better, the student will have one additional term to achieve a total grade average of "B" or better. Any time from the end of that term forward that their total grade average falls below a "B," they will be dropped from the program.
3. A student who earns more than two grades below "B-" or more than one grade of "F" is dismissed for failure to maintain satisfactory grades. Although grades of "C+," "C," and "C-" carry academic credit, receipt of such grades indicates that the student is performing at a substandard level. Additionally, ASHA hours are not accumulated in Clinical Courses (Practicum) with earned grades below a "B-."
4. A student may not graduate without completing all coursework and thus removing any outstanding grades of "I" (Incomplete).
5. An MA student in the program may apply no more than 6 graduate credits earned at another institution toward the degree.
6. Grades in prerequisite courses taken at Temple or elsewhere, while matriculated in the graduate program, will be counted in determining whether a student has satisfied standards of scholarship described in 1-4 above, but prerequisite credits will not count toward the number of credits required for the master's degree.

**Culminating Event:** Students choose between two options: completion of the comprehensive examination or preparation and defense of a master's thesis.

#### *Comprehensive Examination:*

The purpose of the comprehensive examination is to demonstrate the application of accumulated knowledge to the basic science and clinical domains. It is typically taken in the final term of study.

#### *Master's Thesis:*

The thesis option is intended to provide an opportunity for students interested in research to conduct a study of greater scope and rigor than is generally possible in the context of a one-term seminar or independent study. Students electing the thesis option enroll for up to 3 credits of CSCD 9996 Thesis Seminar, typically in the Spring of Year 2.

The thesis involves descriptive and/or experimental research and is supervised by a faculty member selected by the student. Students develop a prospectus (i.e., proposal of research to be conducted) in conjunction with their MA committee, which consists of the thesis advisor and two other faculty members. A final presentation is given orally to a symposium of faculty and students. The thesis document is submitted to the Graduate School in accordance with its guidelines.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/speech-language-and-hearing-science-ma-hp-splh-ma>

### Department Information:

Dept. of Communication Sciences and Disorders  
110 Weiss Hall (265-62)  
1701 N. 13th Street  
Philadelphia, PA 19122-6085  
cph@temple.edu  
215-204-7543

## Submission Address for Application Materials:

<https://csdcas.liaisoncas.com/>

## Department Contacts:

### Admissions:

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

### Chairperson:

Lisa Bedore, PhD  
lisa.bedore@temple.edu  
215-204-7543

# Graduate Certificate: Clinical Health Services Research

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Clinical Health Services Research.

## About the Certificate

The Clinical Health Services Research (HSR) certificate is a 12-credit graduate certificate program designed to provide a foundation for clinicians and other healthcare professionals in this multidisciplinary field that studies how social factors, financing systems, organizational structures and processes, health technologies and personal behaviors affect access to healthcare, quality of care and costs. Knowledge of health services research allows healthcare professionals to develop both better understandings of population-based outcomes and skills to participate in population-based research. The certificate program gives students a grounding in health services research, including study design, methods and interpretation of results. Successful completion of the Clinical HSR certificate program enables graduates to:

- illustrate understanding of health services research theory and concepts by comparing alternative models for population health issues;
- formulate innovative and important health service research questions informed by systematic reviews of the literature, stakeholder needs, and relevant theoretical and conceptual models;
- select appropriate study designs to address specific health services research questions;
- develop expertise in collecting primary health and healthcare data and in assembling secondary data from existing sources;
- use appropriate analytical methods to assess associations between variables; and
- apply knowledge of the structures, performance, quality, policy and context of health and healthcare to formulate solutions for health policy problems.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main, with certain courses also offered at Temple University Center City (TUCC)

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis. NOTE: International students may not be eligible to

apply for a student visa based on admission to the certificate program. Please contact the CPH Office of Admissions for more information.

**Non-Matriculated Student Policy:** The certificate program is open to non-matriculated graduate students.

## Admission Requirements and Deadlines

### Application Deadline:

Fall, Spring, and Summer admissions are on a rolling basis. Interested students should contact the College of Public Health for permission to enroll in coursework.

Apply at <https://sophasexpress.liaisoncas.com/>.

For questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree. Official transcripts must be submitted for all postsecondary institutions attended.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
EPBI 5201	Epidemiological Research Methods I	3
HIM 5129	Health Data Analysis	3
Select two from the following:		6
EPBI 8301	Clinical Research Methods in Public Health	
HIM 5106	Technology for Population Health	
HIM 5111	Technology for Healthcare Financial Management	
HPM 5122	Healthcare Quality and Safety	
HPM 8008	Health Economics	
HPM 8013	Research Methods in Health Policy	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/clinical-health-services-research-certificate-graduate-hp-chsr-grad>

### Admissions Information:

Dept. of Health Services Administration and Policy  
524 Ritter Hall Annex  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-5899

### Submission Address for Application Materials:

<https://sophasexpress.liasoncas.com/>

### Department Contacts:

*Admissions:*  
CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*Interim Graduate Program Director:*  
William E. Aaronson, PhD  
Associate Professor  
william.aaronson@temple.edu  
215-204-8128

*Chairperson:*  
Huanmei Wu, PhD  
huanmei.wu@temple.edu  
215-204-8163

## Graduate Certificate: Global Health

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Global Health.

### About the Certificate

Through the College of Public Health's graduate certificate in Global Health, students develop the core skills and theoretical foundations they need to address complex public health issues that are prevalent in low- and middle-income, as well as high-income countries. These issues include access to basic preventive care; emergency disaster relief; maternal and child health; and water, sanitation and hygiene.

This academic certificate is open to all students who are currently completing graduate degrees in the College of Public Health and wish to supplement their degree. It cannot be taken independently outside of the College of Public Health. Courses in the Global Health certificate program provide a global health perspective on the student's existing area of graduate study and a foundation for an international career in public health or health services.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis.

**Non-Matriculated Student Policy:** The certificate program is currently not open to non-matriculated graduate students. It is structured to be completed by graduate students currently enrolled in MPH and public health-related doctoral programs or in other graduate programs at Temple. Students are permitted to take up to 9 credits of certificate coursework before applying. Those who are accepted into the certificate program may then apply the coursework completed prior to matriculation toward the certificate requirements. Matriculation is required to earn the certificate.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall and Spring* admissions are on a rolling basis. Students who are currently enrolled in a graduate program in Temple University's College of Public Health or in another Temple school or college are welcome to apply to the Global Health graduate certificate program. For more information on how to apply, interested applicants should contact Natasha Benoit, Senior Academic Advisor, at [nbenoit@temple.edu](mailto:nbenoit@temple.edu) or 215-204-5105.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Public Health Core Course</b>		
SBS 5001	Fundamentals of Public Health	3
<b>Global Health Core Course</b>		
Select one from the following:		3
ENVH 5013	Global Environmental Health	
HPM 5132	Comparative Health Systems: Local, National, and Global Perspectives	
SBS 5008	Global Health: People, Planet, Place	
<b>Global Health Electives</b>		
Select two from the following: <sup>1</sup>		6
ENVH 5309	Water, Sanitation and Public Health	
EPBI 5301	<sup>2</sup>	
EPBI 8206	Infectious Disease Epidemiology	



EPBI 8209	Epidemiology of HIV/AIDS
EPBI 8213	Cancer Epidemiology
GUS 5021	International Urbanization
GUS 8031	Critical Issues in Globalization, Sustainability, and Social Justice
HIM 5256	Global Health Informatics
HPM 5005	International Health Studies Abroad <sup>3</sup>
HPM 5107	Forced Migration and Refugee Health
HPM 5131	Health Policy Analysis
<b>Total Credit Hours</b>	<b>12</b>

1

Additional Global Health core courses above may be selected to fulfill the elective requirements.

2

EPBI 5301 is a graduate-level international internship course designed to support undergraduate students in EPBI 2301 Public Health Beyond Borders. This experience is approved on a case-by-case basis.

3

HPM 5005 is an overseas experience approved on a case-by-case basis. Students enroll in the course offered by their department of enrollment. This elective can also be completed by engaging in an approved Master of Public Health fieldwork placement overseas.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/global-health-certificate-graduate-hp-glhl-grad>

### Department Information:

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
epibio@temple.edu  
215-204-8726

### Submission Address for Application Materials:

cph@temple.edu

### Department Contacts:

*Certificate Program Co-Directors:*  
Graciela Jaschek, PhD, MPH  
Assistant Professor  
graciela.jaschek@temple.edu  
215-204-4083

Aimee J. Palumbo, PhD, MPH  
Graduate Program Director  
aimee.palumbo@temple.edu  
215-204-4023

*Chairperson:*

Resa M. Jones, MPH, PhD

Associate Professor  
resa.jones@temple.edu  
215-204-7881

## Graduate Certificate: Health Informatics

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Health Informatics.

### About the Certificate

The Health Informatics (HI) certificate is a 12-credit graduate certificate program designed to provide students with the skills and competencies needed to embark on or advance a career in health informatics. The certificate program provides hands-on skills taught by industry leaders. The program is designed to expand students' understanding of privacy and security requirements, the role of standards and data exchange, and fundamentals associated with managing health information technology. In addition, approximately 50 hours of training and assignments are conducted in an educational electronic health record (EHR) setting, providing the student with hands-on skills.

Courses taken in the certificate program count toward the MS in Health Informatics, if the student continues in the master's program.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis.

**Non-Matriculated Student Policy:** The certificate program is not open to non-matriculated graduate students.

### Admission Requirements and Deadlines

#### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Apply at <https://sophasexpress.liaisoncas.com/>.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree, having earned a cumulative GPA of 3.0 on a 4.0 scale, from an accredited college or university. Transcripts from all postsecondary institutions attended must be uploaded at SOPHAS Express.

#### Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and

physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
HIM 5101	Fundamentals of Health Informatics	3
HIM 5112	Health Information Systems: Design and Decision Making	3
HIM 5127	Privacy and Security: Protecting Healthcare Data	3
HIM 5128	Health Data: Standards and Interoperability	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/health-informatics-certificate-graduate-hp-hlti-grad>

### Department Information:

Dept. of Health Services Administration and Policy  
524 Ritter Hall Annex  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
hlthinfo@temple.edu  
215-204-5899

### Submission Address for Application Materials:

<https://sophasexpress.liasoncas.com/>

### Department Contacts:

*Admissions:*

CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*Program Director:*

Bari Dzomba, MS, PhD  
bari.dzomba@temple.edu  
215-204-1892

*Chairperson:*

Huanmei Wu, PhD  
huanmei.wu@temple.edu

215-204-8163

## Graduate Certificate: Interdisciplinary Health Communication

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Interdisciplinary Health Communication.

### About the Certificate

Addressing many public health priority problems requires a solid foundation of training in public health-related program planning, evaluation and research methods as well as effective and responsible communication strategies. Health communication strategies can facilitate dissemination of information about health risks, improve underserved populations' access to services and navigation of healthcare systems, enhance the quality of patient care, improve healthcare decision-making, and influence adoption of healthier lifestyles in populations with elevated risk of chronic disease.

The graduate certificate in Interdisciplinary Health Communication (IHComm) is a 12-credit certificate program administered by the College of Public Health's Department of Social and Behavioral Sciences (SBS) in collaboration with the Law Klein College of Media and Communication to create opportunities for interdisciplinary training of their graduate students. The certificate program's name emphasizes the interdisciplinary structure of the curriculum and its instructors drawn from the College of Public Health and the Klein College of Media and Communication. The curriculum is designed to facilitate advanced knowledge and training in critical evaluation of public health problems and how to address them using health communication methods, applying key concepts and theories germane to public health and health communication interventions, and accessing research as guided by the Council on Education in Public Health (CEPH). Faculty within the certificate program have training and expertise across a dozen public health- and media-related disciplines, including advertising; communication; ecology; health communication; health psychology; health education and health promotion research; health systems research; media studies; public health program planning and evaluation; public relations; research methods in social, behavioral and communication sciences; and theories of communication and health behavior change.

The IHComm certificate is structured to enable its completion by existing graduate students enrolled in MPH and public health-related doctoral programs as well as Klein College's Media and Communication PhD and Communication for Development and Social Change MS programs. In addition to MPH and Klein graduate students, the certificate is open for enrollment by graduate students in other programs throughout Temple University as well as non-matriculated, non-degree-seeking students as a continuing education certificate.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main and Online

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the CPH Office of Admissions for more information.

**Non-Matriculated Student Policy:** The certificate program is open to non-matriculated graduate students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall and Spring* admissions are on a rolling basis.

For the Interdisciplinary Health Communication certificate, all applicants — whether currently enrolled graduate students or non-matriculated students — must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

### Letters of Reference:

*Number Required Only of Non-Matriculating Applicants: 2*

*From Whom:* At least one letter of recommendation should be obtained from a college/university instructor, preferably at the graduate level.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree and provide transcripts as indicated:

- Applicants currently enrolled in a Temple graduate program must demonstrate a minimum cumulative GPA of 3.0 in completed coursework.
- Non-matriculating applicants must present a transcript demonstrating successful completion of the baccalaureate degree with a minimum cumulative GPA of 3.5 OR a transcript demonstrating successful completion of a graduate degree with a minimum GPA of 3.0.

**Statement of Goals:** State your career goals and describe how the certificate is relevant to those goals.

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
GDC 8002	Communication for Social Change Project Design or CMGT 5002 Leadership in Crises and Conflict Management	3
SBS 8105	Health Communication	3
<b>Communication Elective</b>		
Select one from the following:		3
ADV 5503	Persuasion and the Marketplace	
CMGT 8106	Communication Theory for Professionals	
GDC 8003	Research Approaches in Communication, Development and Social Change	
MSP 8254	Public Information Media Campaigns	
<b>Social and Behavioral Sciences Elective</b>		
Select one from the following:		3
SBS 5001	Fundamentals of Public Health	
SBS 5009	Risk Communication and Public Health	
SBS 8005	Health Promotion in Vulnerable Populations	
SBS 8009	Health Psychology	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/interdisciplinary-health-communication-certificate-graduate-hp-ihc-grad>

### Admissions Information:

College of Public Health Office of Admissions  
1101 W. Montgomery Avenue, Suite 370  
Philadelphia, PA 19122-2715  
[cph@temple.edu](mailto:cph@temple.edu)  
215-204-5200

### Submission Address for Application Materials:

IHComm Graduate Certificate Program  
College of Public Health Office of Admissions  
1101 W. Montgomery Avenue, Suite 370  
Philadelphia, PA 19122-2715

### Department Contacts:

*Admissions:*  
CPH Office of Admissions  
[cph@temple.edu](mailto:cph@temple.edu)  
215-204-5200

*IHComm Certificate Program Director:*  
Anne S. Frankel, PhD  
[anne.frankel@temple.edu](mailto:anne.frankel@temple.edu)  
215-204-9117

# Graduate Certificate: Maternal and Child Health

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Maternal and Child Health.

## About the Certificate

The need for training public health students in maternal and child health (MCH) is undeniable. The U.S. ranks poorly with stark racial disparities on many MCH health indicators. For example, the maternal mortality ratio reached 42.4 in non-Hispanic Black women in 2017, among the highest in the developed world. Nearly 50% of pregnancies are unplanned. Chronic disease and opioid use in women are increasing and, thereby, contributing to low mortality rates. In addition, child and youth health concerns include obesity at 19% and 8% for asthma. Overall, 30.7% of Philadelphia mothers receive inadequate prenatal care; the infant mortality rate is 8.24 per 100,000 live births, with a rate of 13.3 in North Philadelphia; 10.4% of infants are preterm; and child asthma hospitalization rates are 727.3/100,000. Local teen births are double U.S. rates. Other pressing concerns are housing conditions, violence and sexually transmitted infection rates in youth.

The Maternal and Child Health (MCH) graduate certificate is poised to make a significant impact. Jointly administered by the Departments of Social and Behavioral Sciences (SBS) and Epidemiology and Biostatistics (EPBI), the MCH certificate program promotes interdisciplinary training of graduate students, with a curriculum that is designed to draw graduate students largely from MPH and MSW training programs. The certificate curriculum includes two three-credit core courses, one in SBS and one in EPBI, and two additional three-credit electives. The curriculum facilitates advanced knowledge, training and skills to enter the MCH workforce and support Title V programs, as guided by the Council on Education for Public Health (CEPH).

**Time Limit for Certificate Completion:** 3 years

**Campus Location:** Main and Online

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the CPH Office of Admissions for more information.

**Job Prospects:** Demand is growing for public health professionals who have taken advanced coursework in maternal and child health and can demonstrate specialized knowledge and skills. Graduates are sought by:

- Local, state, federal and international public health agencies;
- Hospitals, clinics, and rehabilitation and hospice-care facilities;
- Community-based organizations and nonprofits;
- Schools and educational institutions; and
- Healthcare continuing education and training centers.

Graduates with advanced training in maternal and child health are prepared for employment as a community health worker, health educator, MCH epidemiologist, program evaluation specialist, program manager/coordinator, public health policy analyst, public health researcher, and youth and family advocate. Pursuit of an advanced degree is also an option.

**Non-Matriculated Student Policy:** The certificate program is currently not open to non-matriculated graduate students. It is structured to be completed by graduate students currently enrolled in MPH and public health-related doctoral programs or in other graduate programs at Temple. Students are permitted to take up to 9 credits of certificate coursework before applying. Those who are accepted into the certificate program may then apply the coursework completed prior to matriculation toward the certificate requirements. Matriculation is required to earn the certificate.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Students who are currently enrolled in a graduate program in Temple University's College of Public Health or other graduate programs at Temple are welcome to apply to the graduate certificate program in Maternal and Child Health. For more information on how to apply, interested applicants should contact Natasha Benoit, Senior Academic Advisor, at [nbenoit@temple.edu](mailto:nbenoit@temple.edu) or 215-204-5105.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EPBI 8207	Reproductive and Perinatal Epidemiology	3
SBS 5105	Maternal and Child Health	3
Select one from the following:		
EPBI 5101	Fundamentals of Epidemiology	3
EPBI 5201	Epidemiological Research Methods I	3
<b>Electives</b>		
Select one from the following:		
ENVH 8207	Environmental Epidemiology	3
EPBI 8213	Cancer Epidemiology	3
RCTH 5212	Play and Pediatric Development	3
SBS 8005	Health Promotion in Vulnerable Populations	3
SSWG 8403	Children and Families in the Social Environment	3
SSWG 8407	Policy on Families and Children	3

SSWG 8607 Advanced Policy - Gender and Sexuality

**Total Credit Hours**

12

**GPA Required to be Awarded the Certificate:** 2.67 minimum. All four courses chosen toward completion of the MCH graduate certificate must be completed with at least a "B-" or better to receive the certificate. Students must also maintain good academic standing.

**Contacts****Certificate Program Web Address:**

<https://www.temple.edu/academics/degree-programs/maternal-and-child-health-certificate-graduate-hp-mach-grad>

**Department Information:**

Dept. of Social and Behavioral Sciences  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
publichealth@temple.edu  
215-204-8726

**Department Information:**

Dept. of Epidemiology and Biostatistics  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
epibio@temple.edu  
215-204-8726

**Submission Address for Application Materials:**

cph@temple.edu

**Department Contacts:**

*Graduate Program Director, Social and Behavioral Sciences:*  
Anne Frankel, PhD  
Associate Professor  
anne.frankel@temple.edu  
215-204-9117

*Graduate Program Director, Epidemiology and Biostatistics:*  
Aimee J. Palumbo, PhD, MPH  
Associate Professor  
aimee.palumbo@temple.edu  
215-204-4023

**Graduate Certificate: Nutrition**

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Nutrition.

**About the Certificate**

The graduate certificate in Nutrition is a 12-credit certificate program that provides competency-based public health nutrition training to existing MPH students or non-matriculating students. Current public health students can earn an MPH and a certificate in nutrition. In conjunction with the MPH, graduates become more competitive candidates for public

health nutrition jobs. Non-matriculating students earn a certificate in nutrition and are well positioned to continue studying in the College of Public Health and complete an MPH degree or use the knowledge and skills in their existing profession.

Upon completion of the certificate, students are able to:

- apply knowledge of nutritional health promotion and disease prevention for individuals, groups and populations;
- utilize a foundational knowledge on public and global health issues and nutritional needs;
- implement or coordinate nutritional interventions for individuals, group, or populations;
- apply current research and evidence-informed practice to services;
- discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels; and
- apply awareness of cultural values and practices to the design or implementation of public health policies and programs.

Nutrition certification has value for healthcare professionals, particularly registered dietitians. Many RDs who do not hold a graduate degree will likely want to earn a master's degree to remain competitive in the workforce. The Nutrition certificate offers an opportunity for these professionals to take courses as non-matriculating students without committing to a master's degree, but the transition to a degree student would be seamless. In addition, all MPH courses are offered in the evening or online, which makes the program ideal for working professionals.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the CPH Office of Admissions for more information.

**Non-Matriculated Student Policy:** The certificate program is open to non-matriculated graduate students.

**Admission Requirements and Deadlines****Application Deadline:**

*Fall and Spring* admissions are on a rolling basis.

For the Nutrition certificate, all applicants — whether currently enrolled graduate students or non-matriculated students — must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liasoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at cph@temple.edu or 215-204-5200.

**Letters of Reference:**

*Number Required Only of Non-Matriculating Applicants:* 2

*From Whom:* At least one letter of recommendation should be obtained from a college/university instructor, preferably at the graduate level.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree and provide transcripts as indicated:

- Applicants currently enrolled in a Temple graduate program must demonstrate a minimum cumulative GPA of 3.0 in completed coursework.
- Non-matriculating applicants must present a transcript demonstrating successful completion of the baccalaureate degree with a minimum cumulative GPA of 3.5 OR a transcript demonstrating successful completion of a graduate degree with a minimum GPA of 3.0.

**Statement of Goals:** State your career goals and describe how the certificate is relevant to those goals.

**Resume:** Current resume or CV required.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
SBS 5002	Program Planning, Theory, and Practice	3
Select three from the following:		9
NUTR 5015	Nutrition Education and Counseling	
NUTR 5815	Cultural and Community Nutrition	
NUTR 5835	Nutrition Through the Lifecycle	
SBS 5015	Public Health Nutrition	
SBS 8009	Health Psychology	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/nutrition-certificate-graduate-hp-nutr-grad>

### Admissions Information:

College of Public Health Office of Admissions  
1101 W. Montgomery Avenue, Suite 370  
Philadelphia, PA 19122-2715  
cph@temple.edu

215-204-5200

## Submission Address for Application Materials:

Nutrition Graduate Certificate Program  
College of Public Health Office of Admissions  
1101 W. Montgomery Avenue, Suite 370  
Philadelphia, PA 19122-2715

## Department Contacts:

*Admissions:*  
CPH Office of Admissions  
cph@temple.edu  
215-204-5200

*Nutrition Certificate Program Director:*  
Pamela Weisberg-Shapiro, PhD, MPH, RD  
pamela.weisberg-shapiro@temple.edu  
215-204-6086

## Graduate Certificate: Public Health Law Research

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Public Health Law Research.

### About the Certificate

Students interested in the role law and policy may play on health, well-being and equity can pursue the Public Health Law Research graduate certificate. This interdisciplinary certificate focuses on providing foundational training in public health law practice and research methods. This field of research generates evidence that can inform policy initiatives to advance health and well-being.

To advance health through policy initiatives, it is important that there be sound evidence on which to act. Students who complete the certificate program can demonstrate the integration of behavioral and organizational theory with a law or policy; describe the mechanism behind a law or policy; and systematically evaluate the law or policy at the level of individual provisions, rather than just a holistic view.

The transcribed Public Health Law Research graduate certificate is offered in a fully online format advancing the goals of current graduate and doctoral students both within and outside Temple University in a variety of disciplines, from lawyers and public health practitioners to criminologists, historians, sociologists and others that value health, well-being and equity. The certificate requires four courses taught in partnership nationally by faculty at the Beasley School of Law and the College of Public Health.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis.

**Non-Matriculated Student Policy:** The certificate program is not open to non-matriculated graduate students.

## Admission Requirements and Deadlines

### Application Deadline:

Fall, Spring and Summer admissions are on a rolling basis. Interested students should contact the College of Public Health for permission to enroll in coursework.

All applicants to the Public Health Law Research certificate must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liasoncas.com/>.

Applicants should check their application status on the SOPHAS portal often and inquire directly of SOPHAS about receipt of materials. For other questions, please contact the CPH Office of Admissions at [cph@temple.edu](mailto:cph@temple.edu) or 215-204-5200.

**Bachelor's Degree in Discipline/Related Discipline:** Applicants must hold a baccalaureate degree.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EPBI 5002	Biostatistics	3
JUDO 0954	Public Health Law	3
Select one from the following:		3
HPM 8013	Research Methods in Health Policy	
JUDO 5058	Empirical Legal Research Methods: Health Policy <sup>1</sup>	
<b>Research Project</b>		
HPM 9991	Public Health Research Project	3
<b>Total Credit Hours</b>		<b>12</b>

1

For course information in the Beasley School of Law, see <https://www.law.temple.edu/resources/student-services/course-registration/schedules-and-descriptions/>.

**GPA Required to be Awarded the Certificate:** 2.7 minimum

### Culminating Event:

*Public Health Research Project:*

The culminating experience for the Public Health Law Research graduate certificate is an independent project (HPM 9991) to evaluate a law or policy of the student's choice and communicate the findings.

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/public-health-law-research-certificate-graduate-hp-phlr-grad>

### Admissions Information:

Dept. of Health Services Administration and Policy  
Ritter Hall Annex, 9th Floor (004-09)  
1301 Cecil B. Moore Avenue  
Philadelphia, PA 19122-6005  
[publichealth@temple.edu](mailto:publichealth@temple.edu)  
215-204-8726

### Submission Address for Application Materials:

<https://sophas.liasoncas.com/>

### Department Contacts:

#### Admissions:

CPH Office of Admissions  
[cph@temple.edu](mailto:cph@temple.edu)  
215-204-5200

#### Chairperson:

Huanmei Wu, PhD  
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## Graduate Certificate: Public Health Preparedness and Response

COLLEGE OF PUBLIC HEALTH

Learn more about the graduate certificate in Public Health Preparedness and Response.

### About the Certificate

Public health and emergency preparedness are considered central concepts in regional, national and global public health and emergency management agencies and systems. To prevent and respond to future public health emergencies, including outbreaks, epidemics and pandemics, the number of public health professionals with training in public health preparedness and emergency response needs to increase. To prepare students for employment in this field, the College of Public Health's graduate certificate in Public Health Preparedness and Response (PHPR) provides students with training in bioethics, cultural sensitivity, emergency preparedness, health equity, outbreak response, public health surveillance and vulnerable populations. Students learn to identify and respond to public health threats with a focus on outbreaks and epidemics and leave the program with the skills required to work with public health agencies to make effective decisions in responding to emergencies and mitigating risk. Courses in the PHPR certificate program provide a risk-assessment and decision-making framework for

students' graduate study and a foundation for a career in public health leadership.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate may be completed on a part-time basis.

**Non-Matriculated Student Policy:** The certificate program is currently not open to non-matriculated graduate students. It is structured to be completed by graduate students currently enrolled in MPH and public health-related doctoral programs or in other graduate programs at Temple. Students are permitted to take up to 9 credits of certificate coursework before applying. Those who are accepted into the certificate program may then apply the coursework completed prior to matriculation toward the certificate requirements. Matriculation is required to earn the certificate.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall* and *Spring* admissions are on a rolling basis. Students who are currently enrolled in a graduate program in Temple University's College of Public Health or in another Temple school or college are welcome to apply to the PPHR graduate certificate program. For more information on how to apply, interested applicants should contact Natasha Benoit, Senior Academic Advisor, at [nbenoit@temple.edu](mailto:nbenoit@temple.edu) or 215-204-5105.

**Laptop:** All incoming students in the College of Public Health are required to have a laptop. Academic programs in the college are technology intensive. They incorporate statistical and database analyses; utilize specialized tools for athletic training, kinesiology and physical therapy; stream audio and video for communication sciences; facilitate online interactive counseling for social work; and foster clinical experiences and online assessments. The laptop requirement enables the College of Public Health to improve opportunities for active learning and provide greater access to specialized software and required tools in and out of the classroom, better preparing students for the workforce. Learn more about device specifications and suggested vendors. Students can use excess financial aid (i.e., funds that are reimbursed after all tuition and fees are paid) to meet student needs, including the purchase of a laptop. Scholarships may also provide funding.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
EPBI 5205	Surveillance, Epidemics and Outbreaks	3
EPBI 5206	Risk Assessment and Preparedness Decision Making	3
<b>Electives</b>		
Select two from the following:		6
BIOL 5128	Genomics and Infectious Disease Dynamics	
EPBI 8206	Infectious Disease Epidemiology	
EPBI 8209	Epidemiology of HIV/AIDS	

GUS 5069	GIS for Health Data Analysis
HIM 5127	Privacy and Security: Protecting Healthcare Data
HPM 8015	Public Health Policy and Legal Issues
SBS 5009	Risk Communication and Public Health
SBS 8105	Health Communication
SSWG 8303	Dynamics of Health, Health Care, and Health Systems
<b>Total Credit Hours</b>	<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/public-health-preparedness-and-response-certificate-graduate-hp-pbpr-grad>

### Department Information:

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Resa M. Jones, MPH, PhD  
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215-204-7881



## College of Science and Technology

With more than 4,000 students, the College of Science and Technology (CST) is one of Temple University's fastest growing schools. Students work side-by-side with experienced faculty researchers in the laboratory, field and classroom. Since 2007, external funding for advanced research has more than doubled, creating new opportunities for CST's more than 200 world-class faculty members. Excellence begins with faculty members who inspire and challenge every student.

A cornerstone of CST's graduate programs is research with a focus on advancing knowledge and finding solutions to today's toughest challenges. This real-world, hands-on approach is ideal for preparing students for careers in academia and industry — or as entrepreneurs in the computer, science and technological fields. Students work closely with world-class researchers to understand the science, hone their investigation skills, and ask pertinent and important questions. Professors create an environment that encourages inquiry and rewards hard work.

CST's efforts to advance the quality of research, education and engagement with the world are greatly enhanced by its state-of-the-art Science Education and Research Center (SERC). As of Fall 2014, SERC is home to advanced laboratories and classrooms designed to attract talented students and scholars and foster interdisciplinary research. It is one of the most advanced facilities of its kind on the East Coast.

### Graduate Programs and Certificates

- Bioinformatics PhD (p. 883)
- Bioinformatics and Biological Data Science PSM (p. 886)
- Bioinnovation PSM (p. 888)
- Biology MA (p. 891)
- Biology MS (p. 893)
- Biology PhD (p. 894)
- Biotechnology PSM (p. 897)
- Chemistry MS (p. 898)
- Chemistry PhD (p. 900)
- Computational Data Science MS (p. 903)
- Computer and Information Science PhD (p. 905)
- Computer Science MS (p. 908)
- Cyber Defense and Information Assurance PSM (p. 910)
- Environmental Geoscience MS (p. 912)
- Forensic Chemistry PSM (p. 913)
- Geology MS (p. 915)
- Geoscience PhD (p. 916)
- High-Performance Computing for Scientific Applications PSM (p. 918)
- Information Science and Technology MS (p. 920)
- Mathematics MS (p. 922)
- Mathematics PhD (p. 924)
- Physics MS (p. 927)
- Physics PhD (p. 929)
- Scientific Writing PSM (p. 930)
- Graduate Certificate: Bioinformatics (p. 933)
- Graduate Certificate: Bioinnovation (p. 934)
- Graduate Certificate: Biotechnology (p. 935)
- Graduate Certificate: Computer Science (p. 936)
- Graduate Certificate: Computer Science Instruction (p. 937)
- Graduate Certificate: Cyber Defense and Information Assurance (p. 938)
- Graduate Certificate: Forensic Chemistry (p. 939)
- Graduate Certificate: High-Performance Computing for Scientific Applications (p. 940)
- Graduate Certificate: Information Science and Technology (p. 940)
- Graduate Certificate: Mathematics for Teaching (p. 941)
- Graduate Certificate: Scientific Writing (p. 942)

### Graduate Faculty

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## Bioinformatics PhD

### COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Doctor of Philosophy in Bioinformatics.

### About the Program

Bioinformatics is a field of study that lies primarily at the intersection of the biological and computational sciences and includes significant elements of biochemistry, mathematics and statistics. The shared theme of this broad discipline is the application of sophisticated computing technologies to address questions on typically massive amounts of biological data.

The Bioinformatics PhD program is a joint venture between the Departments of Biology, Chemistry, and Computer and Information Sciences, pulling together the exceptional breadth and depth of teaching and research faculty in the College of Science and Technology. The program offers strong doctoral candidates an alternative to the Biology

PhD program for those interested in studying computational genomics in the research labs of faculty in biology, chemistry and computer science. Students gain rigorous advanced training in this expanding field through broad preparation in coursework related to the major research areas in bioinformatics.

While the program is administered through the Department of Biology, faculty from several departments in the College of Science and Technology teach coursework. Thus, a student's primary advisor may be faculty in a department other than Biology.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program itself is explicitly interdisciplinary, with students needing to be versatile in a wealth of computational and data-science contexts. Students are expected to develop specialized knowledge in one or more areas of the life sciences, as well as develop expertise in computational approaches to analyzing large amounts of data.

**Areas of Specialization:** Students focus on one of four main areas of concentration:

- Biological Data Analysis
- Evolutionary Genomics
- Evolutionary Medicine
- Structural Bioinformatics

**Job Prospects:** This program produces well-trained bioinformaticians who can be employed across a broad range of informatics fields, including the health professions, pharmaceutical and biotechnology, governmental agencies, as well as academia.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the department.

**Financing Opportunities:** Temple University offers a limited number of fellowships to support outstanding students in the doctoral program. Fellowships typically provide support, including a stipend and tuition, for two years.

Additional support is available in the form of Teaching and Research Assistantships. The principal duties of a Teaching Assistant include assisting faculty in the classroom; offering field and laboratory instruction; preparing materials for demonstration; conducting tutorials and laboratory sessions; and grading labs, quizzes and tests. Attendance at weekly laboratory preparation sessions is required. The duties of a Research Assistant vary depending on the faculty member or principal investigator who is directing a specific research project. The appropriate project(s) are determined by consultation between the student and the student's academic and research advisors. Research Assistants are expected to devote 20 hours per week to research obligations. Both Teaching and Research Assistantships typically provide a nine-month academic-year stipend and full tuition remission (up to 9 credits per term), but are generally awarded on a per term basis. Summer stipends are also available. Assistantships are awarded competitively.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 5

To be considered for a University fellowship, applications must be completed by January 5. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty whose research and teaching are in relevant areas, and who are familiar with the applicant's academic and/or research or computational abilities.

**Coursework Required for Admission Consideration:** Applicants should have a solid background in Biology or Biochemistry, and have had significant experience in computer programming. Alternately, a student may have a solid background in computer science and significant exposure to the life sciences, particularly genomics or structural biochemistry. Other backgrounds are considered if the applicant has broad experience across two or more STEM fields.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in a STEM field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's program, computational background, research goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Required, with combined minimum score of 305 on the quantitative and verbal reasoning sections.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Bioinformatics program. The credits must be equivalent to coursework offered by the College of Science and Technology at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The Bioinformatics Steering Committee makes recommendations to the Biology Department Chair for transferring credits on an individual basis. The maximum number of credits a student may transfer is 6.

**Advanced Standing:** Students who enter the PhD program with a master's degree may be considered for advanced standing. The Steering Committee recommends the awarding of advanced standing on a case-by-case basis. The credits must be equivalent to coursework offered at Temple, with a grade of "B" or better having been earned in the course(s). The maximum number of advanced standing credits awarded is 15.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 36*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 5131	Topics in Bioinformatics	3
Three BIOL or CHEM courses at the 5000 level or higher		9
<b>Advanced Study Courses</b>		
Four courses at the 5000 level or higher <sup>1</sup>		12
<b>Research Courses</b>		
<b>12</b>		
BIOL 9994	Preliminary Examination Preparation	
BIOL 9998	Pre-Dissertation Research / Elevation to Candidacy	
BIOL 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>36</b>

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With the approval of the advisor and Program Coordinator, students select graduate courses in their area of interest within the bioinformatics field. No more than two courses may be taken outside of the College of Science and Technology.

### Additional Requirements:

All graduate-level courses must be passed with a "B-" or better.

All PhD candidates must have experience teaching at Temple University. A minimum teaching requirement of one term may be satisfied by serving as a Teaching Assistant in a Bioinformatics-affiliated department.

Attendance at scheduled departmental colloquia is required.

### Culminating Events:

*Preliminary Examination:*

The student independently prepares a written proposal and submits it to the Graduate Committee by April 1 of the student's fourth term. The proposal should follow the general format of a postdoctoral proposal to a federal granting agency (e.g., NIH). It should include background surrounding a particular research problem, including literature related to the problem, and a detailed methodological plan for investigating the problem. The sections of the written proposal should include Title; Abstract (not to exceed 300 words); Specific Aims; Background and Significance; Preliminary Data; Experimental Design (including Rationale, Specific Methods, Interpretation of Possible Results, and Pitfalls and Alternative Strategies); and References. The preliminary exam proposal should be 15 to 20 pages in length. The research advisor is not to make direct contributions.

The Area Committee has two weeks in which to review the written proposal, and the student is allowed only one re-write. If the proposal

is not accepted after the first re-write, the student is considered to have failed the exam. If the written proposal is accepted, an oral examination is scheduled through the department and held within two weeks. The oral examination tests the student's understanding of the background and substance of the research proposal and understanding of the area of specialization in which the research is embedded.

The preliminary examination is administered by the Preliminary Examination Committee. The student's primary research advisor is allowed to attend but must remain silent unless called upon by the Committee for clarification or advice. A minimum of three examiners serve on the Preliminary Examination Committee. The full exam, both written and oral, is graded by the Preliminary Examination Committee, and one of the following grades is assigned: Pass or Fail. The evaluators look for a breadth and depth of understanding of specific research areas, a critical application of that knowledge to specific biological phenomena, and an ability to write a proposal in a manner consistent with scientists in the student's specialization. The student is notified of the grade the day the exam is taken. A passing grade requires a 2/3 majority of the Preliminary Examination Committee. Students who receive a grade of Fail may retake the exam one additional time. Examinations that are to be retaken must be completed before October 1 of the following academic year.

*Dissertation:*

The doctoral dissertation is an original bioinformatics study that demonstrates the student's knowledge of research methods and mastery of their primary area of research.

The Doctoral Advisory Committee includes a minimum of four members: three from the list of CST faculty affiliated with the Bioinformatics PhD program, including the advisor, and one from outside the College of Science and Technology. Departmental/affiliated faculty members must be Graduate Faculty or equivalent research faculty and are chosen by the student and advisor. The Doctoral Advisory Committee is to be formed within two to three months after successful completion of the preliminary examination, with the exception of the outside member who may be chosen just prior to the dissertation defense. The student may petition the Biology Department Graduate Committee to change an advisor or committee member.

The Doctoral Examination is to consist of a formal departmental colloquium open to the public, but conducted by the Doctoral Advisory Committee. The student then meets with the Dissertation Examining Committee after the colloquium for the dissertation defense. The penultimate version of the dissertation must be approved by the Doctoral Advisory Committee at least two weeks before the Graduate School deadline for submission of final copies.

The scheduling of the dissertation defense is to be arranged by the dissertation advisor. The Graduate School must be notified at least ten working days in advance. Announcements of the dissertation defense are posted around the Biology Department and the host department as well as advertised via e-mail or listserv.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/bioinformatics-phd-st-binf-phd>

## Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
phdbioinform@temple.edu  
215-204-8877

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### Admissions:

Sandhya Verma  
phdbioinform@temple.edu  
215-204-8854

### Program Co-Directors:

Rob J. Kulathinal  
robkulathinal@temple.edu  
215-204-0620

David Liberles, PhD  
daliberles@temple.edu

### Department Chairperson:

Robert Sanders  
robert.sanders@temple.edu  
215-204-8851

# Bioinformatics and Biological Data Science PSM

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Professional Science Master's in Bioinformatics and Biological Data Science.

## About the Program

Bioinformatics and Biological Data Science are the disciplines of science wherein computers are joined with the latest discoveries in genomics, biochemistry and biophysics. These rapidly growing fields bring together elements of biology, chemistry, computer science, physics and statistics. The Bioinformatics and Biological Data Science degree at Temple University, a leader in the field, is a two-year Professional Science Master's (PSM) degree that features:

- an interdisciplinary approach involving scientists from across Temple University;
- classes taught by esteemed tenure and tenure-track faculty, as well as by our industry and government partners;
- hands-on training in professional and management skills;
- partnerships with industry and government leaders, including a diverse and active External Advisory Board;
- access to real-world independent research projects; and
- an applied focus on responsibility and ethics in research and policy.

**Time Limit for Degree Completion:** 2 years

## Campus Location: Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most of the classes are offered in the evenings or on weekends to enable full-time working professionals to be enrolled in the program. International students are required to register as full-time students.

**Interdisciplinary Study:** Students in the Temple University Bioinformatics and Biological Data Science master's degree program benefit from an advanced curriculum developed by leading Temple faculty in the Departments of Biology, Chemistry, and Computer and Information Sciences. The program has been designed to provide students with extensive skills in computer programming as well as deep knowledge in genomics and structural biology. All three areas are required in this challenging and exciting field. Because the degree is a Professional Science Master's, the program also offers:

- professional skills through courses in professional development;
- a research internship in a biotech company or other research center; and
- connections to key employers in the Philadelphia area.

**Accreditation:** Temple University is fully accredited by the Middle States Commission on Higher Education.

**Areas of Specialization:** The PSM degree program offers concentrations in:

- Bioinformatics
- Biological Data Science

Students selecting a concentration are required to take the two courses (6 credits) listed under the chosen concentration on the Program Requirements grid. Students may also opt to take one course from each concentration and thereby complete the requirements for the degree without a transcribed concentration.

**Job Prospects:** Official job placement is not offered, but Bioinformatics and Biological Data Science are areas of rapid job growth and have become essential parts of healthcare research and the biotechnology and pharmaceutical industries. Graduates of PSM programs are in high demand, underscoring the PSM as an attractive career path for those who do not wish to become academic researchers or pursue a doctorate.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the Biology Department.

**Financing Opportunities:** Financial assistance in the form of Research or Teaching Assistantships is not offered at this time.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1; December 15 international

Applications submitted after the priority deadline will be considered for admission on a rolling basis.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters should be obtained from college/university faculty or faculty who are familiar with the applicant's competency. If the applicant has an established career in a related field, the applicant's immediate supervisor should provide one of the letters.

**Coursework Required for Admission Consideration:** Applicants should have a strong background in one or more STEM fields: Science, Technology, Engineering and Mathematics.

**Bachelor's Degree in Discipline/Related Discipline:** The Bioinformatics and Biological Data Science PSM program has been designed for recent graduates and professionals who have a bachelor's degree or equivalent in a STEM field.

**Statement of Goals:** In approximately 500 to 1,000 words, specify your interest in the Bioinformatics and Biological Data Science PSM program, career goals, and academic and professional achievements.

#### Standardized Test Scores:

GRE: Required. A combined minimum score of 305 on the quantitative and verbal reasoning sections is expected.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Interview:** An in-person or Skype interview is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Bioinformatics and Biological Data Science PSM program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The PSM in Bioinformatics and Biological Data Science Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 5312	Biostatistics	3
BIOL 5403	Genomics	3
BIOL 5411	Structural Bioinformatics I	3
BIOL 5506	Professional Development Seminar for PSM in Biotechnology	1
BIOL 5511	Ethics in Bioinformatics	2

BIOL 5514	Biological Models in Python	3
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### Concentration Core Courses

Select two courses from the following: <sup>1,2</sup> 6

<b>Bioinformatics</b>		
BIOL 5509	Computational Genomics	
CHEM 5412	Structural Bioinformatics II	
<b>Biological Data Science</b>		
BIOL 5323	Global Change Science: Analytics with R	
CIS 5528	Predictive Modeling in Biomedicine	

**Electives** <sup>3</sup> 6

### Capstone Course

BIOL 9995	Capstone Project	3
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**Total Credit Hours** 30

1

Students who elect to earn a transcribed concentration are required to take the two courses (6 credits) listed under the chosen concentration. Students may also opt to take one course from each field of study and thereby complete the requirements for the degree without a transcribed concentration.

2

With the Advisor's permission, any one Bioinformatics concentration course may be replaced with a graduate-level Bioinformatics course to complete the Bioinformatics concentration. Similarly, any one Biological Data Science concentration course may be replaced with a graduate-level Biological Data Science course to complete the Biological Data Science concentration.

3

In consultation with and approval from the Advisor, students may take any two graduate-level courses based on their optional concentration, specific research and career interests.

## Proposed Plan of Study Outlined by Year and Term

<b>Year 1</b>		
<b>Fall</b>		<b>Credit Hours</b>
BIOL 5403	Genomics	3
BIOL 5514	Biological Models in Python	3
Select one from the following:		3
BIOL 5312	Biostatistics <sup>1</sup>	
BIOL 5411	Structural Bioinformatics I <sup>1</sup>	
<b>Credit Hours</b>		<b>9</b>
<b>Spring</b>		
Elective		3
Select two from the following:		6
BIOL 5323	Global Change Science: Analytics with R <sup>2</sup>	
BIOL 5509	Computational Genomics <sup>3</sup>	
CHEM 5412	Structural Bioinformatics II <sup>3</sup>	
CIS 5528	Predictive Modeling in Biomedicine <sup>2</sup>	
<b>Credit Hours</b>		<b>9</b>



<b>Year 2</b>		
<b>Summer I</b>		
BIOL 5506	Professional Development Seminar for PSM in Biotechnology	1
<b>Credit Hours</b>		<b>1</b>
<b>Fall</b>		
BIOL 5511	Ethics in Bioinformatics	2
BIOL 9995	Capstone Project	1
Select one from the following:		3
BIOL 5312	Biostatistics <sup>1</sup>	
BIOL 5411	Structural Bioinformatics I <sup>1</sup>	
<b>Credit Hours</b>		<b>6</b>
<b>Spring</b>		
BIOL 9995	Capstone Project	2
Elective		3
<b>Credit Hours</b>		<b>5</b>
<b>Total Credit Hours</b>		<b>30</b>

1

All students should take BIOL 5411 in Year 1 and BIOL 5312 in Year 2, except for those opting for the Biological Data Science concentration. Students who choose the Biological Data Science concentration should start with BIOL 5312 in Year 1 and take BIOL 5411 in Year 2.

2

Students opting for a transcribed concentration in Biological Data Science select BIOL 5323 and CIS 5528.

3

Students opting for a transcribed concentration in Bioinformatics select BIOL 5509 and CHEM 5412.

**Culminating Event:***Capstone Project:*

BIOL 9995 Capstone Project constitutes a culminating event of the Bioinformatics and Biological Data Science PSM and requires the submission of a written project and oral presentation of the results. Capstone research may be completed in any laboratory at Temple University at the invitation of the Principal Investigator (PI) or through an internship/co-op/full-time job in the field of Bioinformatics or Biological Data Science in industry, the healthcare system, or a government agency. Since all Bioinformatics and Biological Data Science PSM classes are offered in the evening, students can avail themselves of these opportunities during the day. The process of locating internships is facilitated by the Bioinformatics and Biological Data Sciences PSM program based on the choice of optional concentration, specific research and career interests of the individual student.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/bioinformatics-psm-st-binf-psm>

**Department Information:**

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078

cst.psm@temple.edu  
215-204-8854

**Submission Address for Application Materials:**

<https://cst.temple.edu/academics/graduate-programs/apply-now>

**Department Contacts:***Program Director:*

David Liberles, PhD  
daliberles@temple.edu

**Bioinnovation PSM**

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Professional Science Master's in Bioinnovation.

**About the Program**

Bioinnovation entails identification, commercialization and dissemination of novel biological technologies, concepts and models. The primary objective of the Professional Science Master's (PSM) program in Bioinnovation is to develop a portfolio of knowledge and experience that allows individuals with a background in science, business, communication, law, and policy and regulation to pursue careers in such fast-growing fields as bioinformation, the environment, global health, pharmaceuticals and biotechnology, technology transfer and trade. The program offers:

- extensive biotechnology and biomedical background to challenge and complement traditional thinking and applications;
- review of the translational nature of biodiscoveries through classroom instruction and direct interaction with different bioindustry professionals, including scientists, lawyers, journalists and others; and
- development of team and matrix work routines and effective communication skills.

The Bioinnovation PSM program draws on the strengths of Temple faculty in the College of Science and Technology and the Fox School of Business and Management. Program development and implementation are executed by the PSM in Bioinnovation Steering Committee, which partners with Internal and External Advisory Board members and the Temple University Graduate School.

**Time Limit for Degree Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most of the classes are offered in the evenings or on weekends to enable full-time working professionals to be enrolled in the program. International students are required to register as full-time students.

**Interdisciplinary Study:** The two-year program consists of a series of multi- and interdisciplinary core courses related to application of systems biology; dissemination of biodiscoveries; epigenetic and genetic applications in drug design and drug response; ethics, regulation and policy; feasibility assessment of innovative business ideas; innovation in biomodels and concepts; management and marketing for technologists; and research and commercialization of biomarkers and biotargets.

Many of the courses are writing intensive and also provide students with opportunities to sharpen their oral presentation skills. All student research projects are developed with the cooperation of Temple faculty and members of our External Advisory Board under the guidance of the PSM in Bioinnovation Steering Committee.

**Accreditation:** Temple University is fully accredited by the Middle States Commission on Higher Education.

**Areas of Specialization:** Three areas of concentration are offered:

- Bioinnovation in Environment and Society
- Current Topics in Bioinnovation
- Implementation of Biodiscoveries in Health and Other Industries

**Job Prospects:** Official job placement is not offered, but prospects are good. The program is designed to help recent graduates obtain relevant employment as well as accelerate career advancement and/or allow career shift of currently employed professionals. Graduates of PSM programs are in high demand, which underscores the PSM as an attractive career path for those who do not wish to become academic researchers or pursue a doctorate.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the Biology Department.

**Financing Opportunities:** Financial assistance in the form of Research or Teaching Assistantships is not offered at this time.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall Priority Deadline:* March 1; December 15 international

*Spring Priority Deadline:* October 30

Applications submitted after the priority deadline will be considered for admission on a rolling basis. Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within four to six weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters should be obtained from college/university faculty or faculty who are familiar with the applicant's competency. If the applicant has an established career in a related field, the applicant's immediate supervisor should provide one of the letters.

**Coursework Required for Admission Consideration:** Applicants should have a solid background in one or more of the following fields: science, business, communication, law, and policy and regulation. The PSM in Bioinnovation Steering Committee may allow departures from course requirements upon review.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Biology, Chemistry, Business or Communication, or a Juris Doctor in Law (or foreign equivalent), is required. Non-STEM graduates are required to enroll in at least two Biology foundation courses, as recommended by the PSM in Bioinnovation Steering Committee, on a non-matriculated basis.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in the Bioinnovation PSM program, career goals, and academic and professional achievements.

**Standardized Test Scores:**

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Interview:** In-person or video interview required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Bioinnovation PSM program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The PSM in Bioinnovation Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 5226	Innovative Biomodels and Concepts	3
BIOL 5227	Biomarkers and Biotargets: Research and Commercialization	3
BIOL 5228	Epigenetics, Genetics: Applications in Drug Design and Drug Response	3
BIOL 5229	Systems Biology: Principles and Applications	3
BIOL 5239	Dissemination of Biodiscoveries and Virtual Reality in Medicine	3
BIOL 5505	Ethics Regulation and Policy in Biotechnology	3
SGM 5136	Principles of Strategy and Management <sup>1</sup>	3
<b>Electives</b>		
<b>Capstone Course</b>		
BIOL 9995	Capstone Project <sup>2</sup>	3
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup>

With advisor approval, any recommended graduate-level introductory course offered by the Fox School of Business and Management may be substituted for SGM 5136.

2

A total of 3 credits of BIOL 9995 is required for the PSM in Bioinnovation program. Students may start their capstone research project at any time with approval from their advisor.

## Proposed Progressive Coursework Outlined by Year:

Year 1		
Fall		Credit Hours
BIOL 5226	Innovative Biomodels and Concepts	3
BIOL 5227	Biomarkers and Biotargets: Research and Commercialization	3
SGM 5136	Principles of Strategy and Management <sup>1</sup>	3
<b>Credit Hours</b>		<b>9</b>
Spring		
BIOL 5228	Epigenetics, Genetics: Applications in Drug Design and Drug Response	3
BIOL 5229	Systems Biology: Principles and Applications	3
BIOL 5239	Dissemination of Biodiscoveries and Virtual Reality in Medicine	3
Elective <sup>2,3</sup>		3
<b>Credit Hours</b>		<b>12</b>
Year 2		
Summer I		
BIOL 9995	Capstone Project <sup>4</sup>	1
<b>Credit Hours</b>		<b>1</b>
Fall		
BIOL 5505	Ethics Regulation and Policy in Biotechnology	3
BIOL 9995	Capstone Project <sup>4</sup>	1
Elective <sup>2,3</sup>		3
<b>Credit Hours</b>		<b>7</b>
Spring		
BIOL 9995	Capstone Project <sup>4</sup>	1
<b>Credit Hours</b>		<b>1</b>
<b>Total Credit Hours</b>		<b>30</b>

1

With advisor approval, any recommended graduate-level introductory course offered by the Fox School of Business and Management may be substituted for SGM 5136.

2

Students are required to take 6 credits of electives. These can be selected from the program's approved list of electives; any graduate course offered by the Fox School of Business and Management; or any other Temple University graduate-level course that aligns with the students' career goals.

3

Electives are shown in the plan of study as 3-credit courses taken in two academic terms. If students choose to take electives that are fewer than 3 credits and additional time is needed to complete elective coursework, it is recommended that those elective credits be taken in the Spring term of Year 2.

4

A total of 3 credits of BIOL 9995 is required for the PSM in Bioinnovation program. Students may start their capstone research project at any time with approval from their advisor. These credits are shown in the plan of study as 1 credit taken in each of three academic terms. Students may elect to distribute the 3 required credits over one, two or three terms, as their schedule allows.

## Approved Electives:

Code	Title	Credit Hours
BIOL 5234	Bioinnovation Seminar	1.5
BIOL 5235	Milestones in Clinical Translation of Biodiscoveries	1.5
BIOL 5236	Bioadvanced Screening in Health Disparity	1.5
SGM 5137	Entrepreneurial Thinking and New Venture Creation	3
SGM 5138	Global Innovation Strategy: Creating Agile, Innovative, Globally-Competitive Organizations	3
SGM 5139	Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas	3
SGM 5142	Business Model Innovation	3
SGM 5144	Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges	3
SGM 5148	Open Innovation and Managing Strategic Alliances	3

Or any other graduate course offered by the Fox School of Business and Management or Temple University graduate-level course that aligns with the student's career goals

### Culminating Event:

#### Capstone Project:

BIOL 9995 constitutes the capstone experience for the Bioinnovation PSM and requires the submission of a written project and oral presentation of the results.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/bioinnovation-psm-st-bioi-psm>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-0306

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

#### Program Coordinators:

Jackie Sackie  
jackie.sackie@temple.edu

Ramin Shafagh  
ramin.shafagh@temple.edu

*Program Co-Directors:*  
Antonio Giordano  
giordano@temple.edu  
215-204-9521

Gianfranco Bellipanni  
bellipa4@temple.edu  
215-204-9578

## Biology MA

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Arts in Biology.

### About the Program

The MA in Biology emphasizes contemporary coursework for students to gain advanced understanding within the field of modern biology. The Biology MA degree program is designed for students seeking graduate studies in the biological sciences without experimental research in labs. In comparison with the Biology MS (p. 893), the MA in Biology program focuses primarily on coursework and independent research, which helps the student form expertise in one or more areas of biology. Students develop the analytical thinking skills necessary for biological research and literature review.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Many classes are offered in the evening to enable full-time working professionals to be enrolled in the program. International students are required to register as full-time students.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework in Biochemistry, Chemistry, Computer Science, Environmental Science, Engineering, Mathematics and Physics. Special interdisciplinary programs in which faculty from the Biology Department participate include the Center for Biotechnology, Center for Computational Genetics and Genomics, the Institute for Computational Molecular Science, the Institute for Genomics and Evolutionary Medicine, and the Environmental Studies and Neuroscience Programs.

**Areas of Specialization:** Faculty members specialize in the areas of aquatic and terrestrial ecology, biochemistry, biophysics, cell biology, computational genomics, developmental biology, evolutionary and organismal biology, genetics, molecular biology, molecular evolution, neurobiology and virology.

**Job Prospects:** Graduates are prepared for professional schools or careers in fields related to the biological sciences, including academia, biotechnology, government, health professions and pharmaceuticals.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the department.

**Financing Opportunities:** University Fellowships, Graduate Assistantships, and Academic Internships are normally reserved for PhD students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1  
*Spring:* October 30

Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters should be obtained from college/university faculty, whenever possible.

**Coursework Required for Admission Consideration:** Applicants should have a solid background in Biology and should have taken at least eight undergraduate Biology courses and one year each of Calculus, Chemistry and Physics. The Biology Department Graduate Committee may allow exceptions to these course requirements after review.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in a science field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's program, academic achievements and research goals, and provide the names of up to three faculty with whom you would like to conduct your capstone master's research thesis.

### Standardized Test Scores:

GRE: Not required. If submitted, a combined minimum score of 300 on the quantitative and verbal reasoning sections is expected.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Biology program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The Biology Department Graduate Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

## Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 8003	Introduction to Graduate Research	3
Two 8000-level Graduate Seminar courses <sup>1</sup>		6
<b>Electives</b>		
Select courses from the following to total a minimum of 15 credits: <sup>2</sup>		15
BIOL 5101	Evolution	
BIOL 5111	Genomics in Medicine	
BIOL 5112	Fundamentals of Genomic Evolutionary Medicine	
BIOL 5114	Evolutionary Ecology	
BIOL 5128	Genomics and Infectious Disease Dynamics	
BIOL 5241	Genomics and Evolutionary Biology of Parasites and Other Dependent Species	
BIOL 5254	Animal Behavior	
BIOL 5275	Ecology of Invasive Species	
BIOL 5301	Cell Biology	
BIOL 5307	Conservation Biology	
BIOL 5312	Biostatistics	
BIOL 5321	Plant Community Ecology	
BIOL 5325	Research Techniques in Molecular Biology	
BIOL 5358	Cellular/Molecular Neuroscience	
BIOL 5403	Genomics	
BIOL 5411	Structural Bioinformatics I	
BIOL 5416	Tropical Marine Biology: Belize	
BIOL 5428	Virology	
BIOL 5429	Developmental Genetics	
BIOL 5433	Advanced Techniques in Microscopy	
BIOL 5436	Freshwater Ecology	
BIOL 5452	Systems Neuroscience	
BIOL 5454	Neurological Basis of Animal Behavior	
BIOL 5456	Organization and Development of the Nervous System	
BIOL 5465	Mammalian Development	
BIOL 5466	Contemporary Biology	
BIOL 5469	Molecular Biology	
BIOL 5471	Cell Proliferation	
BIOL 5474	Physical Biochemistry	
BIOL 5475	General Biochemistry I	
BIOL 5476	General Biochemistry II	
BIOL 5479	Biotechnology	
BIOL 5501	Analytical Biotechnology	
BIOL 5502	Microbial Biotechnology	
BIOL 5505	Ethics Regulation and Policy in Biotechnology	
BIOL 5506	Professional Development Seminar for PSM in Biotechnology	
BIOL 5509	Computational Genomics	
BIOL 5511	Ethics in Bioinformatics	
BIOL 8985	Teaching in Higher Education: Life Sciences <sup>3</sup>	

**Capstone Course**

BIOL 9995	Capstone Project <sup>4</sup>	6
<b>Total Credit Hours</b>		<b>30</b>

1

One 5000-level course that emphasizes writing and communication may be substituted for one 3-credit 8000-level seminar. The 5000-level course need not be a Biology course but must be approved by the student's advisor and the Graduate Chair.

2

Electives may include BIOL 5000-level courses from the Professional Science Master's programs. Up to 9 credits may also be taken in non-biology graduate courses in related fields such as chemistry, computer science, education and psychology. All non-biology electives must be approved by the student's advisor and the Graduate Chair.

3

This course may only be taken for 3 credits.

4

This course requirement may be satisfied by completing a library thesis.

**Additional Requirement:** All graduate-level courses must be passed with a "B-" or better.

**Culminating Event:***Capstone Project:*

The capstone project, BIOL 9995, is typically completed by conducting an MA library thesis. This is an original study that demonstrates the student's knowledge of the literature, mastery of their primary area of interest, and an advanced knowledge of research methods. The thesis should be limited to a specific problem in the biological sciences and investigated under the direct supervision of a major advisor. The thesis is evaluated by the student's advisor and one other graduate faculty member.

**Contacts****Department Web Address:**

<https://www.temple.edu/academics/degree-programs/biology-ma-st-biol-ma>

**Department Information:**

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
grad.bio@temple.edu  
215-204-8877

**Submission Address for Application Materials:**

<https://cst.temple.edu/academics/graduate-programs/apply-now>

**Department Contacts:***Admissions:*

Sandhya Verma  
grad.bio@temple.edu  
215-204-8854

*Program Coordinator:*

Tonia Hsieh, PhD  
tonia.hsieh@temple.edu

215-204-0617

*Graduate Chairperson:*

Tonia Hsieh, PhD  
tonia.hsieh@temple.edu  
215-204-0617

*Department Chairperson:*

Robert Sanders, PhD  
robert.sanders@temple.edu  
215-204-8851

## Biology MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Biology.

### About the Program

The MS in Biology offers students rigorous advanced study of the Biological Sciences. Broad preparation is offered in major research areas in Biology through a variety of formal courses and advanced seminars. Students are encouraged to take courses in related sciences. Preparation for both research and teaching is important.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** The program encourages interdisciplinary research and coursework in Biochemistry, Chemistry, Computer Science, Environmental Science, Engineering, Mathematics and Physics. Special interdisciplinary programs in which faculty from the Biology Department participate include the Center for Biotechnology, Center for Computational Genetics and Genomics, the Institute for Computational Molecular Science, the Institute for Genomics and Evolutionary Medicine, and the Environmental Studies and Neuroscience Programs.

**Areas of Specialization:** Faculty members specialize in the areas of aquatic and terrestrial ecology, biochemistry, biophysics, cell biology, computational genomics, developmental biology, evolutionary and organismal biology, genetics, molecular biology, molecular evolution, neurobiology and virology.

**Job Prospects:** The department produces well-trained biologists who find work in the biotechnology, health professions and pharmaceutical fields, or in academia or government.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the department.

**Financing Opportunities:** University Fellowships, Graduate Assistantships, and Academic Internships are normally reserved for PhD students.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

*Spring:* October 15; August 1 international

Matriculation in the Fall is recommended. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters should be obtained from college/university faculty, preferably those in laboratory science areas, who are familiar with the applicant's academic and/or research abilities.

**Coursework Required for Admission Consideration:** Applicants should have a solid background in Biology and should have taken at least eight undergraduate Biology courses and one year each of Calculus, Chemistry and Physics. The Biology Department Graduate Committee may allow exceptions to these course requirements after review.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in a science field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's program, academic achievements and research goals, and provide the names of up to three faculty with whom you would like to conduct your master's research thesis.

**Standardized Test Scores:**

GRE: Not required. If submitted, a combined minimum score of 300 on the quantitative and verbal reasoning sections is expected.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Biology program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The Biology Department Graduate Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

### Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 8003	Introduction to Graduate Research	3
	Two 8000-level Biology seminars <sup>1</sup>	6
	Three 5000-level Biology electives	9

Three didactic or research Biology courses <sup>2</sup>	9
<b>Research Course</b>	
BIOL 9996      Master's Thesis Research	3
<b>Total Credit Hours</b>	<b>30</b>

1

One 3-credit 8000-level seminar may be replaced with three 1-credit 8000-level seminars. Also, one 5000-level course that emphasizes writing and communication may be substituted for one 3-credit 8000-level seminar. The 5000-level course need not be a Biology course, but approval from the student's advisor and the Graduate Chair is required.

2

With approval from the student's advisor and the Graduate Chair, relevant courses from departments other than Biology may be taken.

**Additional Requirements:**

All graduate-level courses, including Biochemistry, must be passed with a "B-" or better.

Attendance at scheduled departmental colloquia is required.

**Culminating Event:***Thesis:*

The master's thesis is an original empirical study that demonstrates the student's knowledge of research methods and mastery of their primary area of interest. The thesis should be limited to a specific problem in the biological sciences and investigated under the direct supervision of a major advisor.

A student preparing to defend a master's thesis should confirm a date and time with their committee, composed of both the major advisor and another member of the Graduate Faculty. The student should then register with the department. After the date, time and room are approved, the Biology Department posts flyers announcing the defense.

The student's committee is responsible for evaluating the thesis and its oral defense in a public presentation. The committee votes to pass or fail the thesis and defense at the end of the public presentation. If revisions are required, the committee must approve the changes.

## Contacts

**Department Web Address:**

<https://www.temple.edu/academics/degree-programs/biology-ms-st-biol-ms>

**Department Information:**

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
grad.bio@temple.edu  
215-204-8877

**Submission Address for Application****Materials:**

<https://cst.temple.edu/academics/graduate-programs/apply-now>

**Department Contacts:***Admissions:*

Sandhya Verma  
grad.bio@temple.edu  
215-204-8854

*Program Coordinator:*

Tonia Hsieh, PhD  
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215-204-0617

*Graduate Chairperson:*

Tonia Hsieh, PhD  
tonia.hsieh@temple.edu  
215-204-0617

*Department Chairperson:*

Robert Sanders, PhD  
robert.sanders@temple.edu  
215-204-8851

## Biology PhD

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Doctor of Philosophy in Biology.

### About the Program

The PhD in Biology offers students rigorous advanced study of the biological sciences. Broad preparation is offered in major research areas in Biology through a variety of formal courses and advanced seminars. Students are encouraged to take courses in related sciences. Preparation for both research and teaching is important.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time study is required.

**Interdisciplinary Study:** The program encourages interdisciplinary research and coursework in Biochemistry, Chemistry, Computer Science, Environmental Science, Engineering, Mathematics and Physics. Special interdisciplinary programs in which faculty from the Biology Department participate include the Center for Biotechnology, Center for Computational Genetics and Genomics, the Institute for Computational Molecular Science, the Institute for Genomics and Evolutionary Medicine (see <http://igem.temple.edu/education/overview>), and the Environmental Studies and Neuroscience Programs.

**Areas of Specialization:** Faculty members specialize in the areas of aquatic and terrestrial ecology, biochemistry, biophysics, cell biology, computational genomics, developmental biology, evolutionary and organismal biology, genetics, molecular biology, molecular evolution, neurobiology and virology.

**Job Prospects:** The department produces well-trained biologists who find work in the biotechnology, health professions and pharmaceutical fields, or in academia or government.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the department.

**Financing Opportunities:** Temple University offers a limited number of fellowships to support outstanding students in the doctoral program.

Fellowships typically provide support, including a stipend and tuition, for two years.

Additional support is available in the form of Teaching and Research Assistantships. The principal duties of a Teaching Assistant include assisting faculty in the classroom; offering field and laboratory instruction; preparing materials for demonstration; conducting tutorials and laboratory sessions; and grading labs, quizzes and tests. Attendance at weekly laboratory preparation sessions is required. The duties of a Research Assistant vary depending on the faculty member or principal investigator who is directing a specific research project. The appropriate project(s) are determined by consultation between the student and the student's academic and research advisors. Research Assistants are expected to devote 20 hours per week to research obligations. Both Teaching and Research Assistantships typically provide a nine-month academic-year stipend and full tuition remission (up to 9 credits per term), but are generally awarded on a per term basis. Summer stipends are also available. Assistantships are awarded competitively.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

*Spring:* October 15; August 1 international

To be considered for a University fellowship, applicants should have an essentially complete application on file by January 5.

Matriculation in the Fall is highly recommended. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters should be obtained from college/university faculty, preferably those in laboratory science areas, who are familiar with the applicant's academic and/or research abilities.

**Coursework Required for Admission Consideration:** Applicants should have a solid background in Biology and should have taken at least eight undergraduate Biology courses and one year each of Calculus, Chemistry and Physics. The Biology Department Graduate Committee may allow exceptions to these course requirements after review.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Biology or another science field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's program, research goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Recommended, but not required. Submitting scores could be advantageous for applicants seeking to be awarded a university fellowship. Applicants are encouraged to contact prospective advisors or the chair of the graduate program for more information.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S.

institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Biology program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The Biology Department Graduate Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

**Advanced Standing:** A student who has completed a master's degree or started a PhD program at another institution may apply for advanced standing. Students are awarded varying numbers of credit of advanced standing, up to a maximum of 21, on a case-by-case basis. The credits must be equivalent to coursework offered at Temple, with a grade of "B" or better having been earned in the course(s).

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 8003	Introduction to Graduate Research	3
BIOL 8220	Seminar <sup>1</sup>	3
	Three 8000-level Biology seminars <sup>2</sup>	9
	Two additional graduate-level courses <sup>3</sup>	6
<b>Electives</b>		
	Select three from the following:	9
BIOL 5101	Evolution	
BIOL 5111	Genomics in Medicine	
BIOL 5112	Fundamentals of Genomic Evolutionary Medicine	
BIOL 5114	Evolutionary Ecology	
BIOL 5128	Genomics and Infectious Disease Dynamics	
BIOL 5241	Genomics and Evolutionary Biology of Parasites and Other Dependent Species	
BIOL 5254	Animal Behavior	
BIOL 5275	Ecology of Invasive Species	
BIOL 5301	Cell Biology	
BIOL 5307	Conservation Biology	
BIOL 5312	Biostatistics	
BIOL 5321	Plant Community Ecology	
BIOL 5322	Biology of Plants	
BIOL 5323	Global Change Science: Analytics with R	
BIOL 5335	Polar Biology - Life at the Extremes	
BIOL 5337	Comparative Biomechanics	
BIOL 5338	Epigenetics	



BIOL 5358	Cellular/Molecular Neuroscience
BIOL 5361	Molecular Neuropharmacology
BIOL 5366	Stem Cell Biology
BIOL 5403	Genomics
BIOL 5416	Tropical Marine Biology: Belize
BIOL 5428	Virology
BIOL 5429	Developmental Genetics
BIOL 5436	Freshwater Ecology
BIOL 5452	Systems Neuroscience
BIOL 5454	Neurological Basis of Animal Behavior
BIOL 5456	Organization and Development of the Nervous System
BIOL 5464	Biochemistry of Embryogenesis
BIOL 5465	Mammalian Development
BIOL 5466	Contemporary Biology
BIOL 5469	Molecular Biology
BIOL 5471	Cell Proliferation
BIOL 5474	Physical Biochemistry
BIOL 5475	General Biochemistry I
BIOL 5476	General Biochemistry II
BIOL 5479	Biotechnology
BIOL 5501	Analytical Biotechnology
BIOL 5502	Microbial Biotechnology
EES 5011	Remote Sensing and GIS
<b>Research Courses</b> <sup>4</sup>	<b>6</b>
BIOL 9994	Preliminary Examination Preparation
BIOL 9998	Pre-Dissertation Research / Elevation to Candidacy
BIOL 9999	Dissertation Research
<b>Total Credit Hours</b>	<b>36</b>

1

Students take 1 credit of BIOL 8220 in the Fall and 2 credits of BIOL 8220 in the Spring.

2

One 3-credit seminar may be replaced with three 1-credit seminars.

3

Additional courses are selected from 8000-level seminars or from 5000-level Biology courses. With approval from the student's advisor and the Graduate Chair, two non-Biology graduate-level courses that align with the student's career goals may be taken.

4

A minimum of 2 credits of BIOL 9999 must be taken.

**Additional Requirements:**

All graduate-level courses must be passed with a "B-" or better.

All PhD candidates must have experience teaching at Temple University. A minimum teaching requirement of two terms may be satisfied by serving as a Teaching Assistant in the Biology Department.

Attendance at scheduled departmental colloquia is required.

**Culminating Events:***Preliminary Examination:*

The student independently prepares a written proposal and submits it to the Graduate Committee by April 1 of the student's fourth term. The proposal should follow the general format of a postdoctoral proposal to a federal granting agency (e.g., NIH). It should include background surrounding a particular research problem, including literature related to the problem and a detailed methodological plan for investigating the problem. The sections of the written proposal should include Title; Abstract (not to exceed 300 words); Specific Aims; Background and Significance; Preliminary Data; Experimental Design (including Rationale, Specific Methods, Interpretation of Possible Results, and Pitfalls and Alternative Strategies); and References in PNAS format. The preliminary exam proposal should be 15 to 20 pages in length. The research advisor is not to make direct contributions to the brief.

The Area Committee has two weeks in which to review the written proposal, and the student is allowed only one re-write. If the proposal is not accepted after the first re-write, the student is considered to have failed the exam. If the written proposal is accepted, an oral examination is scheduled through the department and held within two weeks. The oral examination tests the student's understanding of the background and substance of the research proposal and understanding of the area of specialization in which the research is embedded.

The preliminary examination is administered by the Preliminary Examination Committee in the absence of the research advisor. A minimum of three examiners serve on the Preliminary Examination Committee. The full exam, both written and oral, is graded by the Preliminary Examination Committee, and one of the following grades is assigned: Fail, Promising, Pass, High Pass, or Pass with Distinction. The evaluators look for a breadth and depth of understanding of specific research areas; a critical application of that knowledge to specific biological phenomena; and an ability to write a proposal in a manner consistent with scientists in the student's specialization. The student is notified of the grade the day the exam is taken. A passing grade requires a 2/3 majority of the Preliminary Examination Committee. The grade of Promising denotes that an exam must be retaken. Examinations that are to be retaken must be completed before October 1 of the following academic year.

*Dissertation:*

The doctoral dissertation is an original empirical study that demonstrates the student's knowledge of research methods and mastery of their primary area of research.

The Doctoral Advisory Committee includes a minimum of four members: three from the department, including the advisor, and one from outside the department. Departmental members must be Graduate Faculty or equivalent research faculty and are chosen by the student and advisor. The Doctoral Advisory Committee is to be formed within two to three months after successful completion of the preliminary examination, with the exception of the outside member who may be chosen at a later date. The student may petition the Biology Department Graduate Committee to change an advisor or committee member if needed.

The Doctoral Defense is to consist of a formal departmental colloquium open to the public. It is conducted by the Doctoral Advisory Committee, with the outside examiner present. The Graduate School must be notified at least 10 working days in advance. Announcements of the dissertation defense are posted around the Biology Department and sent via e-mail or listserv.

The penultimate version of the dissertation must be approved by the Doctoral Advisory Committee at least two weeks before the Graduate School deadline for submission of final copies.

## Contacts

### Department Web Address:

<https://www.temple.edu/academics/degree-programs/biology-phd-st-biol-phd>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
grad.bio@temple.edu  
215-204-8877

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Admissions:*  
Sandhya Verma  
grad.bio@temple.edu  
215-204-8854

*Program Coordinator:*  
Tonia Hsieh, PhD  
tonia.hsieh@temple.edu  
215-204-0617

*Graduate Chairperson:*  
Tonia Hsieh, PhD  
tonia.hsieh@temple.edu  
215-204-0617

*Department Chairperson:*  
Robert Sanders, PhD  
robert.sanders@temple.edu  
215-204-8851

## Biotechnology PSM

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Professional Science Master's in Biotechnology.

### About the Program

The Professional Science Master's (PSM) program in Biotechnology is a two-year degree program hosted by the Department of Biology, with coursework taught by diverse faculty from Temple University, industry and government. Students work directly with our research faculty on real-world projects, gaining hands-on skills necessary to solve emerging problems. The program culminates in an independent research project based at Temple or one of its industry and government partners in Philadelphia.

**Time Limit for Degree Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most of the classes are offered in the evenings or on weekends to enable full-time working professionals to be enrolled in the program. International students are required to register as full-time students.

**Interdisciplinary Study:** The two-year program consists of a series of multidisciplinary and interdisciplinary core courses that include current topics in biotechnology, analytical biotechnology, bioethics/policy, bioinformatics, environmental biotechnology and microbial biotechnology. Many of the courses are writing intensive and also provide students with opportunities to sharpen their oral presentation skills. All student research projects are developed with the cooperation of Temple faculty and members of our External Advisory Board under the guidance of the PSM Steering Committee.

**Accreditation:** Temple University is fully accredited by the Middle States Commission on Higher Education.

**Areas of Specialization:** Three areas of concentration are offered:

- Bioinformatics in Biotechnology, which entails decision-making based on data accession, as well as manipulation and analysis over a broad range of fields
- Biotechnology in Biomedicine and Drug Discovery, including target identification of disease to drug design, discovery and optimization
- Biotechnology in Industrial and Environmental Engineering, in partnership with the College of Engineering

**Job Prospects:** Official job placement is not offered, but prospects are good. Philadelphia and the surrounding Delaware Valley constitute a primary hub for integrative biotechnology since the area is a major center for pharmaceutical companies, chemical industries and the health sciences. Philadelphia has also exhibited an increasing leadership presence in the emerging Green City movement. Given recent growth in the Biotechnology sector, the demand for a highly trained workforce with a strong science background has soared.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the Biology Department.

**Financing Opportunities:** Financial assistance in the form of Research or Teaching Assistantships is not offered.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall Priority Deadline:* March 1; December 15 international

*Spring Priority Deadline:* October 30

Applications submitted after the priority deadline will be considered for admission on a rolling basis.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters should be obtained from college/university faculty, preferably those in laboratory science areas, who are familiar with the applicant's academic and/or research abilities.

**Coursework Required for Admission Consideration:** Applicants should have a solid background in Biology, Chemistry, Engineering or Physics. The Biology Department's Graduate Committee may allow departures from course requirements upon review.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in a science or engineering field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in Temple's program, research goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Biotechnology PSM program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The Biology Department Graduate Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

*Number of Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 5479	Biotechnology	3
BIOL 5501	Analytical Biotechnology	1.5
BIOL 5502	Microbial Biotechnology	3
BIOL 5503	Biotechnology Laboratory I	3
BIOL 5504	Biotechnology Laboratory II	3
BIOL 5505	Ethics Regulation and Policy in Biotechnology	3
BIOL 5506	Professional Development Seminar for PSM in Biotechnology	1
BIOL 5521	Nucleic Acid Technologies	1.5
Any Bioinformatics or Genomics 5000-level course		3
<b>Electives</b> <sup>1</sup>		<b>6</b>
<b>Capstone Course</b>		

BIOL 9995 Capstone Project 2

**Total Credit Hours** 30

1

Students may elect to take any course relevant to their area of specialization, including coursework offered by the School of Pharmacy's RAQA program. Approval from the PSM Steering Committee is required.

**Culminating Event:**

*Independent Research Project:*

The Biotechnology PSM offers technical and leadership training to address environmental priorities and human health. In this vein, students select an independent research project (BIOL 9995 Capstone Project) by the end of their first year with mentors at Temple and/or approved co-mentors at any off-campus sites, including pharmaceutical companies and government agencies.

Project proposals, which are approved by the PSM Steering Committee, foster technical and intellectual skill building. At the end of the program, the project is presented in written and oral formats to further develop communication skills. These features provide graduates with knowledge and leadership skills to help tackle real-world problems using biotechnology.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/biotechnology-psm-st-biot-psm>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-8842

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Program Coordinators:*

Ramin Shafagh  
ramin.shafagh@temple.edu

Jackie Sackie  
jackie.sackie@temple.edu

*Program Director:*

Shohreh Amini, PhD  
ashohreh@temple.edu  
215-204-0604

## Chemistry MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Chemistry.

## About the Program

The Chemistry graduate program is designed to provide a solid background in the chosen area of specialization. It emphasizes the acquisition of skills that enable students to gain further knowledge in their research and professional careers. For this reason, the Chemistry graduate degree program is research oriented, and seminar attendance and familiarization with the chemical literature are considered integral. The course requirements are comparatively light, although a wide variety of intermediate and advanced courses in related areas are offered. Students are encouraged to take courses, according to their research interests, in related areas such as Biology, Computer Science and Physics.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** A Chemical Physics program is offered jointly with the Department of Physics.

**Areas of Specialization:** The Department of Chemistry offers programs leading to the MS and PhD degrees in Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry and Physical Chemistry. Areas of specialization include environmental chemistry, materials and polymers, medicinal, nanoscience, photonics and surface science. For the master's program, three options are offered:

- Thesis Track, which is designed for students who are not full-time. Students cannot receive financial support from the Chemistry Department when completing this option. Any student wanting to pursue this option must receive prior approval from the Chemistry Graduate Committee.
- Coursework Track, which is designed for students who already have extensive experience in the laboratory and are currently employed in the local chemical industry. Students must obtain permission from the Graduate Committee to pursue this option.
- Research Track, which facilitates earning a master's degree by PhD students who have passed their candidacy exam upon successful defense of their Original Research Proposal or who have completed sufficient coursework commensurate with a master's degree. This track is available to students in the PhD program with approvals from their research advisor and the Graduate Committee.

**Job Prospects:** The majority of students find employment in the chemical industry. Some go on to academic positions or positions in government laboratories.

**Non-Matriculated Student Policy:** Non-matriculated students are allowed to take up to 9 credits before admission into a degree program must be sought.

**Financing Opportunities:** The duties of a Teaching Assistant typically involve leading recitation sections and/or overseeing laboratories, as well as grading lab assignments, tests and quizzes, when applicable. After their first year, most students are supported by a research assistantship.

## Admission Requirements and Deadlines

**Application Deadline:**

*Fall Priority Deadline:* March 1

*Spring Priority Deadline:* October 30

Applications submitted after the priority deadline will be considered for admission on a rolling basis. Note that Spring admission is rare as coursework is designed to start in the Fall.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from faculty or people in industry who are familiar with the academic and/or research aptitude of the candidate.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. Typically, the undergraduate degree has been earned in Chemistry, Biochemistry or a related field.

**Statement of Goals:** Identify your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- PTE Academic: 60
- Duolingo: 110

Regardless of score, all international students are required to take a SPEAK test upon arrival at Temple.

**Resume:** Current resume required.

**Transfer Credit:** All graduate credits earned by a student prior to matriculation in the Chemistry graduate program are subject to evaluation and approval by the Chemistry Graduate Committee. A "Request for Transfer of Graduate Credit" form, found in TUportal under the Tools tab within "University Forms," must be completed. It must be supplemented with an official transcript, sent directly by the Registrar of the institution where the credits were earned. All transfer credits must be "B" or higher and must be from an accredited institution. The maximum number of credits a student may transfer is 6.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

### Thesis Track <sup>1</sup>

Code	Title	Credit Hours
	Six formal lecture courses	18
	Literature seminar	2

One approved graduate course and/or research course	4
CHEM 9996 Master's Thesis Research	6
<b>Total Credit Hours</b>	<b>30</b>

## Coursework Track <sup>1</sup>

Code	Title	Credit Hours
Ten formal lecture courses		30
<b>Total Credit Hours</b>		<b>30</b>

## Research Track <sup>1,2</sup>

Code	Title	Credit Hours
Six or more formal lecture courses		18-21
CHEM 9900 Seminar		2
CHEM 9901 Original Research Proposal Preparation		6-10
or CHEM 9991 Graduate Research Projects		
<b>Total Credit Hours</b>		<b>30</b>

1

In consultation with an academic advisor, students select coursework from the following approved courses: CHEM 5001-9800 (excluding CHEM 5901), and may include BCMS 5003 Fundamentals of Biochemistry or MEDS 5003 Fundamentals of Biochem, BMSC 8702 Enzymes and Proteins, EES 5625 Electron Optical Techniques, MEE 5205 Microscopy and Microanalysis of Materials, and/or PHYS 5000 Topical Seminar. Additional course substitutions may be made with approval of the Graduate Committee.

2

Selecting the Research Track requires approval from the student's research advisor and the Chemistry Graduate Committee.

**Culminating Events:** In addition to successful completion of coursework, the Thesis Track and Coursework Track require the following:

### *Thesis:*

The MS thesis is the culminating event for the Thesis Track. The thesis should be an original piece of research. Often, but not always, the research described in the MS thesis can be published in a peer-reviewed journal. The student coordinates the time for the defense with their Graduate Advisory Committee, which is responsible for evaluating the thesis and its defense. No thesis should go to defense unless it is ready for public scrutiny.

### *Master's Examination:*

The master's examination is usually the last requirement to be fulfilled by students in the Coursework Track. Its purpose is to demonstrate a breadth and depth of knowledge in the core concepts of Chemistry. The exam is based on the student's major track in Chemistry. Faculty members in the student's track write the questions for the master's exam. The faculty members who write the questions grade the exam. Students schedule the exam with the department.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/chemistry-ms-st-chem-ms>

## Department Information:

Dept. of Chemistry  
130 Beury Hall  
1901 N. 13th Street  
Philadelphia, PA 19122-6014  
chemgrad@temple.edu  
215-204-7118

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### *Admissions:*

Graduate Secretary  
chemgrad@temple.edu  
215-204-1980

### *Department Chairperson:*

Ann M. Valentine, PhD  
ann.valentine@temple.edu  
215-204-7836

## Chemistry PhD

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Doctor of Philosophy in Chemistry.

## About the Program

The Chemistry graduate program is designed to provide a solid background in the chosen area of specialization. It emphasizes the acquisition of skills that enable students to gain further knowledge in their research and professional careers. For this reason, the Chemistry graduate degree program is research oriented, and seminar attendance and familiarization with the chemical literature are considered integral. The course requirements are comparatively light, although a wide variety of intermediate and advanced courses in related areas are offered. Students are encouraged to take courses, according to their research interests, in related areas such as Biology, Computer Science and Physics.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** A Chemical Physics program is offered jointly with the Department of Physics.

**Areas of Specialization:** The Department of Chemistry offers programs leading to the MA and PhD degrees in Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry and Physical Chemistry. Areas of specialization include environmental chemistry, materials and polymers, medicinal, nanoscience, photonics and surface science.

**Job Prospects:** The majority of students find employment in the chemical industry. Some go on to academic positions or positions in government laboratories.

**Non-Matriculated Student Policy:** Non-matriculated students are allowed to take up to 9 credits before admission into a degree program must be sought.

**Financing Opportunities:** The duties of a Teaching Assistant typically involve leading recitation sections and/or overseeing laboratories, as well as grading lab assignments, tests and quizzes, when applicable. After their first year, most students are supported by a research assistantship.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

*Spring:* September 15

For Fall admissions, priority is given to applications submitted by December 15. Applications submitted after December 15 will be considered on a case-by-case basis for admissions and financial assistance.

Applications for Spring admission should be received by September 15. Note, however, that Spring admission is rare as coursework is designed to start in the Fall.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from faculty or people in industry who are familiar with the academic and/or research aptitude of the candidate.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required for admission into the PhD program.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required. Typically, the undergraduate degree has been earned in Chemistry, Biochemistry or a related field.

**Statement of Goals:** Identify your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 88
- IELTS Academic: 6.5
- PTE Academic: 60
- Duolingo: 110

Regardless of score, all international students are required to take a SPEAK test upon arrival at Temple.

**Resume:** Current resume required.

**Writing Sample:** Submission of research papers with the applicant as a co-author or any other material associated with the applicant's research aptitude is recommended.

**Advanced Standing:** Students who enter the PhD program, whether with or without a master's degree in Chemistry or a closely related field, may be considered for advanced standing. The Graduate Committee recommends the awarding of advanced standing on a case-by-case basis based on a review of graduate coursework completed at another institution. The credits must be equivalent to graduate chemistry coursework offered at Temple, and the student must have completed the course(s) with a grade of "B" or better. The maximum number of advanced standing credits awarded is 18.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CHEM 5901	Responsibility and Ethics in Chemical Research	1
CHEM 8985	Teaching in Higher Ed:Phys Sci <sup>1</sup>	1
CHEM 9900	Seminar	2
CHEM 9901	Original Research Proposal Preparation	1
<b>Core Courses by Area of Study <sup>2</sup></b>		<b>9</b>
<b>Chemistry Electives <sup>3</sup></b>		<b>9</b>
<b>Research Courses</b>		<b>13</b>
CHEM 9991	Graduate Research Projects	
CHEM 9994	Preliminary Examination Preparation	
CHEM 9998	Pre-Dissertation Research / Elevation to Candidacy	
CHEM 9999	Dissertation Research <sup>4</sup>	
<b>Total Credit Hours</b>		<b>36</b>

1

Students seeking a career in an academic setting are encouraged to take CHEM 8985 for 3 credits so they can earn the Teaching in Higher Education graduate certificate offered by the Center for the Advancement of Teaching at Temple University. Those who choose this option take two fewer credits of CHEM 9991 or CHEM 9994. Part-time students and students not on assistantship are exempted from the requirement to take CHEM 8985, and may instead take an additional credit of CHEM 9991 or CHEM 9994.

2

Areas of study include Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry and Physical Chemistry. See the course grid below for the core courses offered in each area.

3

Chemistry electives may include any courses numbered CHEM 5001-9800 (excluding CHEM 5901 and CHEM 8985), and may include BCMS 5003 Fundamentals of Biochemistry or MEDS 5003 Fundamentals of Biochem, BMSC 8702 Enzymes and Proteins, EES 5625 Electron Optical Techniques, MEE 5205 Microscopy and Microanalysis of Materials, and/or PHYS 5000 Topical Seminar. Additional course substitutions may be made with approval of the Graduate Committee.

4

Students must complete a minimum of 2 credits of CHEM 9999.

## Core Courses by Area of Study

Code	Title	Credit Hours
<b>Analytical Chemistry</b>		<b>9</b>
CHEM 5305	Chemical Kinetics	
Select two courses from the following:		
CHEM 5201	Physical Methods in Organic Chemistry	
CHEM 8310	Special Topics in Analytical Chemistry (Mass Spectroscopy)	
CHEM 8601	Analytical Separations	
EES 5625	Electron Optical Techniques	
<b>Biochemistry</b>		<b>9</b>
CHEM 5401	Biochemistry I	
Select two courses from the following:		
BCMS 5003	Fundamentals of Biochemistry or MEDS 5003 Fundamentals of Biochem	
BMSC 8702	Enzymes and Proteins	
CHEM 8400	Special Topics in Biochemistry (Nucleic Acids)	
CHEM 8401	Bioinorganic Chemistry	
<b>Inorganic Chemistry</b>		<b>9</b>
CHEM 5001	Advanced Inorganic Chemistry I	
CHEM 5201	Physical Methods in Organic Chemistry	
CHEM 8401	Bioinorganic Chemistry	
<b>Organic Chemistry</b>		<b>9</b>
CHEM 5201	Physical Methods in Organic Chemistry	
CHEM 5202	Organic Reaction Mechanisms	
CHEM 5205	Organic Syntheses	
<b>Physical Chemistry</b>		<b>9</b>
CHEM 5301	Quantum Chemistry	
CHEM 5302	Statistical Thermodynamics	
CHEM 5305	Chemical Kinetics	

### Culminating Events:

#### Literature Seminar:

The PhD student makes the presentation of one departmental seminar on a current literature topic or their research, as approved by the seminar professor. The seminar is 30 minutes in length and should include any background material needed to allow the audience to appreciate the topic(s) discussed.

#### Cumulative Examinations:

Cumulative examinations are a major part of the preliminary examinations. Written by the Graduate Faculty, cumulative examinations are offered seven times a year. Each cumulative examination is

evaluated by at least two Graduate Faculty members. Students must pass a total of five "cumes" within the first two years of matriculation.

#### Original Research Proposal:

To obtain PhD candidacy, the student is required to write, present and defend an Original Research Proposal (ORP). The topic of the ORP can be related to the student's research, but must still be original. The proposal is an opportunity for the student to use their scientific knowledge to demonstrate their ability to formulate experiments, calculations, theory and the like to address an important scientific problem. The ORP should also contain a description of the actual research that the student will pursue for their PhD.

The student must consult with their research advisor for guidance prior to writing the ORP. It is understood by writing this document that a general experience in research will help evolve new chemistry through observations made during the course of an ongoing research problem. The ORP needs to be defended within 30 months of matriculation.

#### Dissertation:

The doctoral dissertation is an original study that makes a significant contribution to the field of Chemistry. It should expand the existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The dissertation should be rigorously investigated; uphold the ethics and standard of the field of Chemistry; demonstrate an understanding of the relationship between the primary area of interest and the broader field of Chemistry; and be prepared for publication in a professional journal.

The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the Chemistry Department. Committee compositions must be approved by the Graduate Committee. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the Committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least one additional Graduate Faculty member from outside the Chemistry Department. The Outside Examiner should be identified no later than the beginning of the academic term in which the student will defend the dissertation. The Dissertation Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The Committee votes to pass or fail the dissertation and the defense.

If a student needs to change a member of a Committee, the new member must be approved by the department's Graduate Committee and registered with the department and the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Dissertation Examining Committee and register with the department at least 15 days before the defense is to be scheduled. The time, date and room are arranged within two working days, and the appropriate forms are forwarded to the student. After the defense has been scheduled, the student is required to send the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense. The student posts flyers announcing the defense.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/chemistry-phd-st-chem-phd>

### Department Information:

Dept. of Chemistry  
130 Beury Hall  
1901 N. 13th Street  
Philadelphia, PA 19122-6014  
chemgrad@temple.edu  
215-204-7118

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Admissions:*  
Graduate Secretary  
chemgrad@temple.edu  
215-204-1980

*Department Chairperson:*  
Ann M. Valentine, PhD  
ann.valentine@temple.edu  
215-204-7836

## Computational Data Science MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Computational Data Science.

### About the Program

Data science is a multifaceted, interdisciplinary field that employs techniques and theories drawn from the broad areas of computer and information science, mathematics and statistics, and applies them to a wide range of data-rich domains such as biomedical science, business, education, engineering, geoscience, physical science and social science. The MS in Computational Data Science is designed for students interested in developing expertise in data science with a specialization in computational analytics. The goal is to enable students to analyze large quantities of data to discover new knowledge and facilitate decision-making. To accomplish this, the program provides students with a strong foundation in big data management and analysis; algorithmic, computational and statistical thinking; and an understanding of computer systems.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** Research interests of faculty include:

- Analysis of algorithms
- Artificial intelligence
- Communication and networks
- Computer architecture
- Data analytics
- Digital forensics
- Expert systems
- Flexible and intelligent manufacturing systems
- Graphics
- High-performance computing
- Information security and assurance
- Intelligent CAI systems
- Management information and database systems
- Natural language processing
- Network security
- Parallel and distributive processing and operating systems
- Programming languages
- Sensory and image processing
- Software engineering
- Theory of automata and computation
- Wired and wireless networks

**Job Prospects:** Graduates gain the necessary skills to find positions in the data science field requiring a mix of data analysis skills, the ability to deal with large quantities of data, and a strong foundation in computer science. Graduates are also prepared to undertake doctoral studies, either to deepen their overall data science expertise or learn how to better use their analytics skills in a particular data-rich domain.

**Non-Matriculated Student Policy:** Non-matriculated students are permitted to take a maximum of two graduate-level CIS courses.

**Financing Opportunities:** Assistantships provide a stipend and full-time tuition to qualified students, but are typically reserved for doctoral students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1; December 15 international  
*Spring Priority Deadline:* October 30; August 1 international

Applications submitted after the priority deadline will be considered for admission on a rolling basis. Applications are reviewed as they are received.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from Computer Science faculty and professionals.

**Coursework Required for Admission Consideration:** A minimum of one year of programming and data structures using the C++ or Java programming language and one year of theoretical calculus are required. This includes coursework equivalent to CIS 1068 Program Design and



Abstraction, CIS 2168 Data Structures, MATH 1041 Calculus I, and MATH 1042 Calculus II.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Computer Science is required. Applicants who have insufficient undergraduate coursework in Computer Science will need to take undergraduate courses to address any deficiencies. Students without a Computer Science degree are typically required to take the following courses, which cannot be counted for credit toward the MS degree:

Code	Title	Credit Hours
CIS 2107	Computer Systems and Low-Level Programming	4
CIS 2166	Mathematical Concepts in Computing II	4
CIS 2168	Data Structures	4
CIS 3207	Introduction to Systems Programming and Operating Systems	3-4
or CIS 5012	System Software and Operating Systems	
CIS 3223	Data Structures and Algorithms	3
or CIS 5011	Programming and Data Structure	

**Statement of Goals:** In approximately 500 to 1,000 words, describe your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

#### Standardized Test Scores:

GRE: Required. Scores should be in the 75th percentile on the quantitative section and 25th percentile on the verbal section. Most students submit scores far above the minimums.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate-level Computer Science coursework completed no more than five years prior to the student's matriculation in the graduate program may be transferred into the Computational Data Science MS program. The student must have earned an "A" in the course, and must submit a rationale for applying the credits to the current graduate program. The maximum number of credits a student may transfer is 6.

## Program Requirements

#### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CIS 5511	Programming Techniques	3

CIS 5515	Design and Analysis of Algorithms	3
CIS 5526	Machine Learning	3
Select one from the following:		3

CIS 5512	Operating Systems	
CIS 5516	Principles of Data Management	
CIS 5642	Computer Architecture	

#### Electives 15-12

Select at most three Big Data courses from the following:

CIS 5512	Operating Systems <sup>1</sup>	
CIS 5516	Principles of Data Management <sup>1</sup>	
CIS 5517	Data-Intensive and Cloud Computing	
CIS 5590	Topics in Computer Science <sup>2</sup>	
CIS 5642	Computer Architecture <sup>1</sup>	
CIS 5643	Emerging Storage Systems and Technologies	
CIS 5644	Distributed Systems	
CIS 9665	Advanced Topics in Data Base Systems	

Select at most three Data Analysis courses from the following:

CIS 5523	Knowledge Discovery and Data Mining	
CIS 5524	Analysis and Modeling of Social and Information Networks	
CIS 5525	Neural Computation	
CIS 5535	Probabilistic Graph Models	
CIS 5538	Text Mining and Language Processing	
CIS 5543	Computer Vision	
CIS 5603	Artificial Intelligence	

Select at most two Statistics and domain-related courses <sup>2</sup>

Select at most one CIS course numbered less than 5500 <sup>2</sup>

Select at most three credits of Independent Study:

CIS 9282	Independent Study <sup>2</sup>	
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#### Capstone Course

CIS 9995	Capstone Project	3-6
or CIS 9996	Master's Thesis Research	

**Total Credit Hours 30**

1

Course may be selected as an elective if not taken as a core course above.

2

Selection of any of these courses requires approval from the student's advisor.

#### Culminating Event:

*Capstone Project:*

Under the close supervision of CIS graduate faculty, students complete a capstone project as the culminating event. CIS 9995 Capstone Project is taken for only 3 credits. Students who choose to complete a master's thesis must take 6 credits of CIS 9996 Master's Thesis Research for the capstone.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/computational-data-science-ms-st-cds-ms>

## Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
cisadmit@temple.edu  
215-204-8450

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### Admissions:

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

### Graduate Advisor:

Andrew Rosen, PhD  
andrew.rosen@temple.edu  
678-665-1415

### Graduate Chairperson:

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

### Department Chairperson:

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

# Computer and Information Science PhD

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Doctor of Philosophy in Computer and Information Science.

## About the Program

The Computer and Information Science PhD program prepares a student to undertake independent research leading to science and engineering advances in computer and information sciences. The program is structured around the PhD dissertation, with coursework and seminars designed to attain the requisite quality of the dissertation. An important criterion for the dissertation is that it be publishable in a recognized journal and presentable at international conferences.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** The PhD program focuses on four research tracks:

1. Artificial Intelligence and Applications, which is concerned with systems that exhibit intelligent behavior.
2. Computer and Network Systems, which covers systems programming, operating systems, and system architectures, including networks and distributed systems.
3. Information Systems, which focuses on systems that provide information to improve the performance of organizations.
4. Software Systems, which is dedicated to the creation of software and its associated methodologies.

**Job Prospects:** Graduates typically find employment in universities, industry or government agencies.

**Non-Matriculated Student Policy:** Non-matriculated students are permitted to take a maximum of two graduate-level CIS courses.

**Financing Opportunities:** Teaching Assistants teach two undergraduate laboratory sections each term under the direction of a faculty lecturer. Assistantships provide a stipend and full-time tuition.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15

*Spring:* November 1; August 1 international

Applications are reviewed as they are received. Late applications may be considered for admission.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from Computer Science faculty and professionals.

**Coursework Required for Admission Consideration:** The applicant is required to have a solid background in Computer and Information Science and related disciplines. In addition, acceptance by a PhD Graduate Faculty member in at least one open track is required. To find a faculty advisor, prospective students should contact Graduate Faculty whose research interests are similar to their own. The list of faculty can be found at <https://cis.temple.edu/people/faculty>.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Computer Science, Information Science, Mathematics, Science or Engineering is required. The applicant's undergraduate program must include a considerable amount of coursework in Computer and Information Science.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Required. Scores should minimally be in the 75th percentile on the quantitative section and 25th percentile on the verbal section for a combined total score of at least 297.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

A score of 45 or greater on the Test of Spoken English (TSE) or a score of 28 or greater on the TOEFL iBT Speaking section is required for international applicants who wish to be considered for a Teaching Assistantship.

**Resume:** Current resume required.

**Advanced Standing:** Students who enter the PhD program with graduate credits in Computer Science or a closely related field may be considered for advanced standing. The CIS Graduate Committee recommends the awarding of advanced standing on a case-by-case basis. The credits must be equivalent to coursework offered at Temple, with a grade of "B" or better having been earned in the course(s). The maximum number of advanced standing credits awarded is 24.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate: 36*

*Required Courses:*

Code	Title	Credit Hours
<b>Track-Specific Courses</b> <sup>1</sup>		<b>24</b>
<b>Research Preparation Courses</b>		
Select 6 credits from the following:		6
CIS 9182	Independent Study	
CIS 9282	Independent Study	
Graduate-level course aligned with the student's research area <sup>2</sup>		
<b>Research Courses</b>		<b>6</b>
CIS 9994	Preliminary Examination Preparation	
CIS 9998	Pre-Dissertation Research / Elevation to Candidacy	
CIS 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>36</b>

<sup>1</sup>

Required and elective courses are identified in the course lists below for each of the four tracks: Artificial Intelligence and Applications, Computer and Network Systems, Information Systems, and Software Systems.

<sup>2</sup>

Course selection requires approval from the faculty advisor and Graduate Committee.

## Artificial Intelligence and Applications Track

Code	Title	Credit Hours
<b>Core Courses</b>		
CIS 5511	Programming Techniques	3
CIS 5526	Machine Learning	3
CIS 5603	Artificial Intelligence	3
<b>Additional Track-Specific Courses</b>		
Select five courses from the following:		15
CIS 5513	Automata and Formal Languages	
CIS 5515	Design and Analysis of Algorithms	
CIS 5523	Knowledge Discovery and Data Mining	
CIS 5525	Neural Computation	
CIS 5527	Data Warehousing, Filtering and Mining	
CIS 5538	Text Mining and Language Processing	
CIS 5543	Computer Vision	
CIS 5617	Computer Networking and Communication	
CIS 9590	Seminar in Advanced Topics in Computer Science	
CIS 9601	Computer Graphics and Image Processing	
CIS 9618	Web Applications Development	
CIS 9651	Artificial Intelligence, Heuristic Models, and Education	
CIS 9665	Advanced Topics in Data Base Systems	
<b>Total Credit Hours</b>		<b>24</b>

## Computer and Network Systems Track

Code	Title	Credit Hours
<b>Core Courses</b>		
Select at least two courses from the following:		6
CIS 5511	Programming Techniques	
CIS 5512	Operating Systems	
CIS 5513	Automata and Formal Languages	
CIS 5617	Computer Networking and Communication	
CIS 5642	Computer Architecture	
<b>Additional Track-Specific Courses</b>		
Select at most six courses from the following:		18
CIS 5515	Design and Analysis of Algorithms	
CIS 5523	Knowledge Discovery and Data Mining	
CIS 5526	Machine Learning	
CIS 5603	Artificial Intelligence	
CIS 5636	Ad Hoc Networks	
CIS 5637	Network & Information Security	
CIS 5639	Wireless Network and Communication	
CIS 5644	Distributed Systems	
CIS 9618	Web Applications Development	
CIS 9665	Advanced Topics in Data Base Systems	
CIS 9666	Advanced Networks and Client-Server Computing	
CIS 9669	Distributed and Parallel Computer Systems	
<b>Total Credit Hours</b>		<b>24</b>

## Information Systems Track

Code	Title	Credit Hours
Select a minimum of one and up to three theory courses from the following:		
CIS 5511	Programming Techniques	
CIS 5515	Design and Analysis of Algorithms	
STAT 8003	Statistical Methods and Concepts	
Select a minimum of one and up to three systems courses from the following:		
CIS 5512	Operating Systems	
CIS 5516	Principles of Data Management	
CIS 5617	Computer Networking and Communication	
CIS 5644	Distributed Systems	
CIS 9666	Advanced Networks and Client-Server Computing	
Select a minimum of two and up to four track-specific courses from the following:		
CIS 5525	Neural Computation	
CIS 5526	Machine Learning	
CIS 5527	Data Warehousing, Filtering and Mining	
CIS 5603	Artificial Intelligence	
CIS 9590	Seminar in Advanced Topics in Computer Science	
CIS 9618	Web Applications Development	
CIS 9665	Advanced Topics in Data Base Systems	
CIS 9668	Design and Development of E-Commerce Systems	
<b>Total Credit Hours</b>		<b>24</b>

## Software Systems Track

Code	Title	Credit Hours
<b>Core Courses</b>		
CIS 5511	Programming Techniques	3
CIS 5512	Operating Systems	3
CIS 5513	Automata and Formal Languages	3
CIS 5515	Design and Analysis of Algorithms	3
CIS 5516	Principles of Data Management	3
CIS 5617	Computer Networking and Communication	3
CIS 9618	Web Applications Development	3
<b>Elective</b> <sup>1</sup>		<b>3</b>
<b>Total Credit Hours</b>		<b>24</b>

1

Selection of the elective requires approval of the Software Systems Track Chair.

### Additional Requirement:

#### *PhD Qualifying Examination:*

The Qualifying Examination tests the student on the fundamentals of Computer and Information Science and the basic body of knowledge in a track. It consists of a written exam on theory and algorithms, systems, and track-specific material. The Qualifying Exam is offered twice a year, usually in late January and late June.

### Culminating Events:

#### *Preliminary Examinations:*

The goal of the preliminary examinations is to test the research skills and knowledge of the student and the appropriateness and feasibility of the proposed research. The exams are completed in two stages:

- Prelim I consists of written and oral components testing advanced track knowledge and in-depth knowledge of the research area. It includes a literature review of the area. This preliminary exam is used to determine whether the student needs to take additional courses in order to support research in the chosen area. Prelim I is open only to the Doctoral Advisory Committee and members of the department. It is to be taken within one year of passing the PhD Qualifying Examination.
- Prelim II consists of written and oral components to assess the appropriateness of the research, including approach and methodology. It is designed to ensure that the selected research problem is of reasonable scope and significance and that the proposed dissertation is feasible. The written portion of Prelim II should be of sufficient quality to be publishable as a department technical report. This exam is open to the public.

The Doctoral Advisory Committee evaluates the preliminary examinations. Each member votes to pass or fail the student. In order to pass, a majority of the committee members must agree that the exam has been satisfactorily completed. Successful completion of the preliminary examinations produces a written understanding among the student, faculty advisor and Doctoral Advisory Committee, specifying the work to be done to obtain final approval of the dissertation.

Students who are preparing to do their preliminary examinations should confirm a time and date with the Chair of their Doctoral Advisory Committee and register with the Administrative Coordinator one month prior to the date. The student and Chair receive confirmation of the time, date and room of the examination.

#### *Dissertation Proposal:*

The dissertation proposal demonstrates the student's knowledge of and ability to conduct the proposed research. The proposal should consist of:

1. the context and background surrounding a particular research problem;
2. an exhaustive survey and review of literature related to the problem; and
3. a detailed methodological plan for investigating the problem.

The proposal should be finished and approved no more than one year after completing coursework. Upon approval, a timeline for completing the investigation and writing process are established.

#### *Dissertation:*

The doctoral dissertation is an original empirical study that makes a significant contribution to the field of Computer and Information Science. It should expand the existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. Dissertations should be rigorously investigated; uphold the ethics and standards of the Computer and Information Science field; demonstrate an understanding of the relationship between the primary area of interest and the broader field of Computer and Information Science; and be prepared for publication in a professional journal.

The Doctoral Advisory Committee is formed to oversee the student's doctoral research and is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be from the Department of Computer and Information Sciences. Committee

compositions must be approved by the CIS Graduate Committee. The Chair is responsible for overseeing and guiding the student's progress, coordinating the responses of the committee members, and informing the student of their academic progress.

The Dissertation Examining Committee evaluates the student's dissertation and oral defense. This committee is comprised of the Doctoral Advisory Committee and at least one additional Graduate Faculty member from outside the Department of Computer and Information Sciences. The Outside Examiner should be identified no later than the beginning of the term in which the student will defend the dissertation. The committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. The committee votes to pass or fail the dissertation and the defense at the conclusion of the public presentation.

If a student needs to change a member of a committee, the new member must be approved by the CIS Graduate Committee and registered with the Administrative Coordinator and the Graduate School.

Students who are preparing to defend their dissertation should confirm a time and date with their Doctoral Advisory Committee and register with the Administrative Coordinator at least 30 days before the defense is to be scheduled. The student and Chair receive confirmation of the time, date and room for the examination.

The Administrative Coordinator sends the Graduate School a completed "Announcement of Dissertation Defense" form, found in TUportal under the Tools tab within "University Forms," at least 10 days before the defense. The department posts flyers announcing the defense.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/computer-and-information-science-phd-st-cis-phd>

### Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
cisadmit@temple.edu  
215-204-8450

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

#### *Admissions:*

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

#### *Artificial Intelligence and Applications Track Chair:*

Longin Jan Latecki, PhD  
latecki@temple.edu

#### *Computer and Network Systems Track Chair:*

Jie Wu, PhD

jiewu@temple.edu

#### *Information Systems Track Chair:*

Zoran Obradovic, PhD  
obradovic@temple.edu

#### *Software Systems Track Chair:*

Justin Shi, PhD  
shi@temple.edu

#### *Graduate Chairperson:*

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

#### *Department Chairperson:*

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

## Computer Science MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Computer Science.

### About the Program

The MS in Computer Science emphasizes a general approach to the study of computing, including courses in artificial intelligence, collaborative systems, computer architecture, database systems, graphics and image processing, networking and communications, operating systems, software engineering and theoretical areas. The curriculum is not oriented toward any specific applications area of computing but emphasizes general graduate-level studies in computing, preparing students for careers in systems analysis, teaching and research.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered after 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Areas of Specialization:** Research interests of faculty include:

- Analysis of algorithms
- Artificial intelligence
- Communication and networks
- Computer architecture
- Data analytics
- Digital forensics
- Expert systems
- Flexible and intelligent manufacturing systems
- Graphics
- High-performance computing
- Information security and assurance
- Intelligent CAI systems
- Management information and database systems
- Natural language processing

- Network security
- Parallel and distributive processing and operating systems
- Programming languages
- Sensory and image processing
- Software engineering
- Theory of automata and computation
- Wired and wireless networks

**Job Prospects:** Graduates often find employment as data analysis consultants, product designers, researchers and software developers. Alternatively, many become involved in the design and implementation of new applications software or the planning and evaluation of computer-based systems. Prospective employers include the government or industrial firms that utilize computers for research and/or production purposes.

**Non-Matriculated Student Policy:** Non-matriculated students are permitted to take a maximum of two graduate-level CIS courses.

**Financing Opportunities:** Assistantships provide a stipend and full-time tuition to qualified students, but are typically reserved for doctoral students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1

*Spring Priority Deadline:* October 30; August 1 international

Applications submitted after the priority deadline will be considered for admission on a rolling basis. Applications are reviewed as they are received.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from Computer Science faculty and professionals.

**Coursework Required for Admission Consideration:** A minimum of one year of programming and data structures using the C++ or Java programming language and one year of theoretical calculus are required. This includes coursework equivalent to CIS 1068 Program Design and Abstraction, CIS 2168 Data Structures, MATH 1041 Calculus I, and MATH 1042 Calculus II.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Computer Science is required. Applicants who have insufficient undergraduate coursework in Computer Science will need to take undergraduate courses to address any deficiencies. Students without a Computer Science degree are typically required to take the following courses, which cannot be counted for credit toward the MS degree:

Code	Title	Credit Hours
CIS 2107	Computer Systems and Low-Level Programming	4
CIS 2166	Mathematical Concepts in Computing II	4
CIS 2168	Data Structures	4
CIS 3207	Introduction to Systems Programming and Operating Systems	3-4

or CIS 5012	System Software and Operating Systems	
CIS 3223	Data Structures and Algorithms	3
or CIS 5011	Programming and Data Structure	

**Statement of Goals:** In approximately 500 to 1,000 words, describe your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Required. Scores should be in the 75th percentile on the quantitative section and 25th percentile on the verbal section. Most students submit scores far above the minimums.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate-level Computer Science coursework obtained no more than five years prior to the student's matriculation in the graduate program may be transferred into the Computer Science MS program. The student must have earned an "A" in the course, and must submit a rationale for applying the credits to the current graduate program. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CIS 5511	Programming Techniques	3
CIS 5512	Operating Systems	3
CIS 5515	Design and Analysis of Algorithms	3
<b>Electives</b>		<b>18-15</b>
<b>Capstone Course</b>		
CIS 9995	Capstone Project	3-6
or CIS 9996	Master's Thesis Research	
<b>Total Credit Hours</b>		<b>30</b>

### Culminating Event:

*Capstone Project:*

Under the close supervision of CIS graduate faculty, students complete a capstone project as the culminating event. CIS 9995 Capstone Project is taken for only 3 credits. Students who choose to complete a master's thesis must take 6 credits of CIS 9996 Master's Thesis Research for the capstone.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/computer-science-ms-st-csci-ms>

### Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
cisadmit@temple.edu  
215-204-8450

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

#### Admissions:

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

#### Graduate Advisor:

Xiuqi "Cindy" Li, PhD  
xli@temple.edu  
215-204-2940

#### Graduate Chairperson:

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

#### Department Chairperson:

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

## Cyber Defense and Information Assurance PSM

### COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Professional Science Master's in Cyber Defense and Information Assurance.

### About the Program

As our physical and digital worlds become more deeply interwoven, a web of interdependence is increasingly fading away the distinction between physical and cyberspace infrastructures. One consequence is that citizens are rendered extremely vulnerable to threats against our cyberinfrastructure by cybercriminals who can inflict crippling blows to pockets of society or even the entire nation. With the dearth of a global information security workforce at a staggering 2.72 million in 2021, the federal government has expressed its support to meet this urgent need.

In designing the Professional Science Master's (PSM) program in Cyber Defense and Information Assurance (CyberDIA), the dynamic and cross-cutting nature of the current and continuously evolving cyberspace and

the barrage of ever-increasing and never-ceasing threats it faces were addressed. The program is designed for aspiring technical professionals at all career levels — entry-level, mid-career and senior executives — who want to equip themselves with skills necessary to protect their organization and the nation from increasing cyberthreats. The multidisciplinary program design borrows knowledge, skills and expertise from different academic disciplines, including business, computer and information sciences, electrical and computer engineering, and law. The key focus is on a holistic cybersecurity framework, i.e., one that is built around the core principles of preventive, detective and corrective security mechanisms. While the CyberDIA curriculum is technology intensive, focusing on network security and digital forensics, it also bridges the ever-increasing gap between cybersecurity technology and cybersecurity policies.

**Time Limit for Degree Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most of the classes are offered in the evenings or on weekends to enable full-time working professionals to be enrolled in the program. International students are required to register as full-time students.

**Interdisciplinary Study:** The CyberDIA curriculum addresses four core knowledge areas:

- Technology (60%)
- Laws, regulations, and governance (15%)
- Policies, procedures, and compliance (15%)
- Leadership and ethics (10%)

**Accreditation:** Temple University is fully accredited by the Middle States Commission on Higher Education.

**Job Prospects:** Official job placement is not offered, but prospects are excellent given the dearth in "Infosec" professionals. Positions include:

- Computer Security Forensic Investigator
- Cybersecurity Systems Engineer
- Information Security Officer
- IT Network Security Penetration Tester
- Security Analyst/Cybersecurity Analyst

**Licensure/Certification:** Successful completion of the CyberDIA PSM program equips students with the necessary knowledge, skills and tools to appear for the following professional certifications:

- Certified Ethical Hacker (CEH) offered by EC-Council
- Certified Information Systems Security Professional (CISSP®) offered by (ISC)<sup>2</sup>
- Computer Hacking Forensic Investigator (CHFI) offered by EC-Council

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the Department of Computer and Information Sciences.

**Financing Opportunities:** Financial assistance in the form of Research or Teaching Assistantships is not offered.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1

*Spring Priority Deadline:* October 30

Applications submitted after the priority deadline will be considered for admission on a rolling basis.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters should be obtained from college/university faculty or faculty who are familiar with the applicant's competency. If the applicant has an established career in the field, the applicant's immediate supervisor should provide one of the letters.

**Coursework Required for Admission Consideration:** Applicants should have a strong background in one or more STEM fields: science, technology, engineering and mathematics. The following prerequisites must also be met:

- a course in data structures, such as Temple's CIS 2168, and
- a course in computer architecture, operating systems and networking, such as Temple's CIS 2229.

**Bachelor's Degree in Discipline/Related Discipline:** The CyberDIA PSM program has been designed for recent graduates and professionals who have a bachelor's degree or equivalent in a STEM field.

**Statement of Goals:** In approximately 250 to 500 words, describe your interest in Temple's program, research goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

**Resume:** Current resume required.

**Interview:** An in-person or Skype interview with the Program Director or members of the CyberDIA PSM Steering Committee is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the CyberDIA PSM program. The credits must be equivalent to coursework offered by the Department of Computer and Information Sciences at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The CyberDIA PSM Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CIS 5017	Operating Systems and Architecture <sup>1</sup>	3
	or CIS 5512 Operating Systems	
CIS 5107	Computer Systems Security and Privacy	3
CIS 5405	Introduction to Digital Forensics <sup>2</sup>	3
CIS 5415	Ethical Hacking and Intrusion Forensics <sup>2</sup>	3
<b>Electives</b>		<b>15</b>
<b>Capstone Course</b>		
CIS 9995	Capstone Project	3
<b>Total Credit Hours</b>		<b>30</b>

1

With advisor recommendation and approval, students take CIS 5017 or CIS 5512.

2

With advisor approval, students who have taken "Introduction to Digital Forensics" and/or "Ethical Hacking and Intrusion Forensics" at the undergraduate level may take an alternate approved course(s) at the master's level.

**Additional Requirement:** All graduate-level courses must be passed with a "B-" or better.

### Culminating Event:

*Capstone Project:*

Each student is given a real security problem. Phase 1 relates to compliance: identifying how the security problem affects the organization and which regulations/standards are to be considered. Phase 2 is the technical piece: identifying network and application vulnerabilities; performing forensics (chain of custody); and documenting findings. In Phase 3, all findings from Phases 1 and 2 are presented to the executive body of the affected organization and the faculty mentor(s).

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/cyber-defense-and-information-assurance-psm-st-cdia-psm>

### Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
cst.psm@temple.edu  
215-204-8450

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>



## Department Contacts:

### Admissions:

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

### Program Director:

Mary Grace Giraldo, PhD  
mary.grace.giraldo@temple.edu  
215-204-8450

### Graduate Chairperson:

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

### Department Chairperson:

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

## Environmental Geoscience MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Environmental Geoscience.

### About the Program

The Department of Earth and Environmental Science offers a two-year MS program in Environmental Geoscience that provides integrated study of the fundamental biological, chemical and physical processes that form the environment. Adopting a holistic view of Earth's systems, its inhabitants and how their interactions facilitate the understanding necessary to develop strategies for a sustainable and prosperous society. Toward that end, environmental scientists use a wide variety of methods such as chemical and structural analyses, description, fieldwork and mapping, geophysical techniques, environmental monitoring and remote sensing, and numerical modeling and physical experiments.

Environmental geoscience studies Earth's natural processes on its surface and in its oceans and atmosphere as well as their interaction with complex societal needs. The Environmental Geoscience MS program includes graduate coursework in Earth science, environmental research, weekly graduate seminars, and research proposal defense leading to completion of a master's thesis. The focus on research in environmental problems produces graduates with a breadth of knowledge in Earth science, skill in conducting scientific research, and excellence in scientific writing and communication so they can address the challenges in the food-water-energy nexus and surficial processes that impact the environment.

During their first term in the Environmental Geoscience MS program, students must confirm a primary research advisor and tentative research project. Profiles of the faculty and their research, as well as links to their personal webpages, are found on the department's website. Students successfully advance through the program by completing geoscience coursework, submitting and defending a research proposal during the second academic term, satisfying a progress report in the third term, and writing and defending a thesis.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is expected.

**Areas of Specialization:** Advanced courses and research opportunities are available in:

- Climate science
- Ecohydrology
- Energy resources
- Environmental geochemistry
- Environmental remediation
- Geophysics and remote sensing
- Polar climate and glaciology
- Urban hydrology

**Job Prospects:** Graduates are accepted into doctoral programs and secure positions in education, industry and government. Students have also used their scientific expertise in environmental law, environmental policy, and community and nonprofit work focused on sustainable and resilient communities.

**Licensure/Certification:** Licensure is recommended after a minimum of three years of on-the-job training. The Pennsylvania Professional Geologist Licensing Examination is administered by the National Association of State Boards of Geology (ASBOG®), which is the regulatory body for 31 states and Puerto Rico. Iowa and Michigan currently require only the Fundamentals of Geology examination, and 17 states are non-regulatory. For more information, visit [https://asbog.org/state\\_boards.html](https://asbog.org/state_boards.html).

**Non-Matriculated Student Policy:** Non-matriculated students are allowed to take up to 9 credits before applying to the program.

**Financial Opportunities:** Students are supported by a combination of Teaching and Research Assistantships, which typically provide a minimum nine-month academic-year stipend and full tuition remission. Summer stipends are also available. Teaching and Research Assistants are expected to devote 20 hours per week to their duties. Teaching Assistants teach labs for non-science, geology and environmental science majors. The duties for Research Assistants are determined by the primary research advisor. Both Teaching and Research Assistantships are awarded competitively. Funding after two years is not guaranteed.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15  
*Spring:* October 15

For full consideration, applications must be submitted by the deadline. Late applications may be considered on a case-by-case basis. Applicants should target Fall entry as Spring admission is rare.

Program admissions are limited and competitive. Applicants are expected to contact the faculty in their area of interest prior to submitting an application.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence or supervisors familiar with their experience in the field.

**Coursework Required for Admission Consideration:** Applicants are required to have taken at least two courses in Geology or Environmental Science and one year of college-level Chemistry, Calculus, Computer Science, Physics or Biology to prepare for graduate-level classes and instructing undergraduate majors. Other coursework may be considered on a case-by-case basis through consultation with the prospective advisor.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree, whether a BA or a BS, with a major in Data Science, Environmental Science, Geology, Geoscience, Mathematics, or the natural sciences is required. Given that Environmental Geoscience is an inherently cross-disciplinary field, other preparation may be considered on a case-by-case basis.

**Statement of Goals:** Identify your specific interest in Temple's MS program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Optional. Scores may be submitted if available.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
Select seven 3-4 credit courses at the 5000 level or higher		21-28
Select 1-2 credit courses at the 5000 level or higher as needed		7-0
EES 9996	Master's Thesis Research	2
<b>Total Credit Hours</b>		<b>30</b>

1

The program of study must be designed in coordination with an Earth and Environmental Science faculty advisor, and only one course may be taken outside of the Department of Earth and Environmental Science.

**Culminating Event:**

*Thesis:*

The Department of Earth and Environmental Science requires an original research thesis as the culminating project to earn its master's degree. The thesis is evaluated for both scientific content and writing style by a

committee of two faculty members and the thesis advisor. Students are required to defend their theses publicly before the academic community.

## Contacts

### Program Web Address:

<https://cst.temple.edu/research-priorities-departments/departments/departments-earth-environmental-science/academics/graduate>

### Department Information:

Dept. of Earth and Environmental Science  
326 Beury Hall  
1901 N. 13th Street  
Philadelphia, PA 19122-6081  
eesgrad@temple.edu  
215-204-8227

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Administrative Assistant:*

Minh Nguyen  
minh@temple.edu  
215-204-8227

*Admissions:*

Dennis O. Terry, Jr., PhD  
Graduate Advisor  
doterry@temple.edu  
215-204-8226

*Chairperson:*

Nicholas Davatzes, PhD  
nicholas.davatzes@temple.edu  
215-204-2319

## Forensic Chemistry PSM

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Professional Science Master's in Forensic Chemistry.

### About the Program

The primary objective of the Forensic Chemistry PSM is for students to develop a portfolio of knowledge and experiences through a strong background in analytical methodologies that will enable them to tackle problems in forensic, environmental and other areas of chemistry. Other objectives include providing:

- a theoretical understanding of major concepts in forensic chemistry,
- a range of practical skills in forensic chemistry, and
- knowledge and skills applicable to academia, industry and government.

The goal of the program is the successful placement of graduates into relevant jobs and to enable career advancement for chemists already employed.

The program includes core requirements in current topics in forensic chemistry; applied biopharmaceutics; data analysis; law, ethics and policy; and toxicology. Attendance is required at annual symposia where leaders in the field of forensic science present on current topics and developments in the field of forensics and forensic chemistry. Many courses in the program are conducted as hands-on training in a modular, forensic chemistry laboratory. An independent project is assigned that will generate knowledge with the goal of developing advanced forensic skills, enabling program graduates to effectively work in and be leaders of the discipline of forensic chemistry. All students are required to complete a forensic chemistry internship.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main, Ft. Washington, and the Center for Forensic Science Education in Willow Grove, PA

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most of the classes are offered in the evenings or on weekends to enable full-time working professionals to be enrolled in the program. International students are required to register as full-time students.

**Interdisciplinary Study:** The two-year program consists of courses in forensic and analytical chemistry as well as data analysis, law and ethics. Student research projects are developed with the cooperation of Temple faculty and members of our External Advisory Board under the guidance of the PSM in Forensic Chemistry Steering Committee.

**Accreditation:** Temple University is fully accredited by the Middle States Commission on Higher Education.

**Job Prospects:** Official job placement is not offered, but prospects are good. The program is designed to help recent graduates obtain relevant employment as well as accelerate career advancement and/or allow career shift of currently employed professionals. Graduates of PSM programs are in high demand, which underscores the PSM as an attractive career path for those who do not wish to become academic researchers or pursue a doctorate.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the Chemistry Department.

**Financing Opportunities:** Financial assistance in the form of Research or Teaching Assistantships is not offered at this time.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1; December 15 international  
*Spring Priority Deadline:* October 30

Applications submitted after the priority deadline will be considered for admission on a rolling basis. Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within three weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters should be obtained from college/university faculty or faculty who are familiar with the applicant's competency. If the applicant

has an established career in a related field, the applicant's immediate supervisor should provide one of the letters.

**Coursework Required for Admission Consideration:** An undergraduate degree in Chemistry or a closely related field is required. Candidates not holding a degree in Chemistry should contact the Program Director for guidance.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Chemistry or a closely related field is required.

**Statement of Goals:** Optional. If submitted, describe in 500 to 1,000 words your interest in the Forensic Chemistry PSM program, career goals, and academic and professional achievements.

### Standardized Test Scores:

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Forensic Chemistry PSM program. The credits must be equivalent to coursework offered by the Chemistry Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The PSM in Forensic Chemistry Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 32

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
CHEM 5102	Data Analysis and Evidence	2
CHEM 5108	Investigative Chemistry	4
CHEM 8001	Leadership, Law and Ethics in Forensic Science	3
CHEM 8007	Biotransformation of Drugs and Xenobiotics	3
CHEM 8107	Advanced Forensic Chemistry	3
CHEM 8111	Forensic Toxicology	3
CHEM 8601	Analytical Separations	3
CHEM 9800	Seminar in Forensic Chemistry (2 terms)	2
<b>Electives</b> <sup>1</sup>		<b>6</b>
<b>Capstone Course</b>		

CHEM 9995	Capstone Project	3
<b>Total Credit Hours</b>		<b>32</b>

1

With advisor approval, students may elect to take CHEM 8310 Special Topics in Analytical Chemistry or any two graduate-level courses. If CHEM 8310 is taken twice, different topics must be studied each term.

#### **Culminating Events:**

##### *Capstone Project:*

The internship involves a significant project completed in an approved forensic laboratory. As part of the culminating event of the Forensic Chemistry PSM, students present their project results at the final Seminar in Forensic Chemistry (CHEM 9800).

## **Contacts**

### **Program Web Address:**

<https://www.temple.edu/academics/degree-programs/forensic-chemistry-psm-st-fchm-psm>

### **Department Information:**

Dept. of Chemistry  
130 Beury Hall  
1901 N. 13th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-2552

### **Submission Address for Application Materials:**

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### **Department Contacts:**

*Program Director:*  
Khaled M. Elokely, PhD  
kelokely@temple.edu

## **Geology MS**

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Geology.

### **About the Program**

The Department of Earth and Environmental Science offers a two-year MS program in Geology that entails the study of the Earth and other terrestrial planets. Geologists work to understand earth structure; materials such as minerals, rock, water and other fluids; history; and the processes that can alter planets. Toward that end, they use a wide variety of methods such as chemical analyses, description, fieldwork and mapping, geophysical techniques, numerical modeling and physical experiments.

The Geology MS program includes graduate coursework in Earth and planetary sciences, research, weekly graduate seminars, and research proposal defense leading to completion of a master's thesis. The program's focus on basic understanding of geological processes

produces graduates with a breadth of knowledge in the field and skill in conducting scientific research.

During their first term in the Geology MS program, students must confirm a primary research advisor and tentative research project. Profiles of the faculty and their research, as well as links to their personal webpages, are found on the department's website. Students successfully advance through the program by completing geoscience coursework, submitting and defending a research proposal during the second academic term, satisfying a progress report in the third term, and writing and defending a thesis.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is expected.

**Areas of Specialization:** Advanced courses and research opportunities are available in:

- Environmental geology, including ecohydrology, energy and land degradation, environmental geophysics, groundwater modeling, ice sheet stability and climate change, Karst hydrology, nanomineralogy and urban hydrology.
- Geochemistry, including nanomineralogy, paleontology-fossil provenance, planetary geology, and weathering and diagenesis.
- Sedimentary geology and paleontology, including coastal and aeolian dynamics, ichnology, paleontology-fossil provenance, paleopedology and modern soils, planetary geology and impact studies, and Precambrian geology.
- Structural geology, including geothermal energy and geomechanics.

**Job Prospects:** Graduates secure positions in industry, education and government, and are accepted into doctoral programs.

**Licensure/Certification:** Licensure is recommended after three years of on-the-job training. The Pennsylvania Professional Geologist Licensing Examination is administered by the National Association of State Boards of Geology (ASBOG®).

**Non-Matriculated Student Policy:** Non-matriculated students are allowed to take up to 9 credits before applying to the program.

**Financing Opportunities:** Students are supported by a combination of Teaching and Research Assistantships, which typically provide a nine-month academic-year stipend and full tuition remission. Summer stipends are also available. Teaching and Research Assistants are expected to devote 20 hours per week to their duties. Teaching Assistants teach labs for non-science and geology majors. The duties for Research Assistants are determined by the primary research advisor. Both Teaching and Research Assistantships are awarded competitively. Funding after two years is not guaranteed.

## **Admission Requirements and Deadlines**

### **Application Deadline:**

*Fall:* January 15  
*Spring:* October 15

For full consideration, applications must be submitted by the deadline. Late applications may be considered on a case-by-case basis. Applicants should target Fall entry as Spring admission is rare.

Program admissions are limited and competitive. Applicants are expected to contact the faculty in their area of interest prior to submitting an application.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required: 2*

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence.

**Coursework Required for Admission Consideration:** Applicants are required to have taken at least five courses in Geology and one year of college-level Chemistry, Calculus, and either Physics or Biology to prepare for graduate-level classes and instructing undergraduate majors.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree, whether a BA or a BS, with a major in Geology or a related program in Science or Mathematics is required.

**Statement of Goals:** Identify your specific interest in Temple's MS program, research goals, future career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: Optional. Scores are typically in the 50th percentile or higher in the quantitative and verbal areas.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

**Resume:** Current resume required.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

*Required Courses:*<sup>1</sup>

Code	Title	Credit Hours
Select seven 3-4 credit courses at the 5000 level or higher		21-28
Select 1-2 credit courses at the 5000 level or higher as needed		7-0
EES 9996	Master's Thesis Research	2
<b>Total Credit Hours</b>		<b>30</b>

1

The program of study must be designed in coordination with an Earth and Environmental Science faculty advisor, and only one course may be taken outside of the Department of Earth and Environmental Science.

**Culminating Event:**

*Thesis:*

The Department of Earth and Environmental Science requires an original research thesis as the culminating project to earn its master's degree. The thesis is evaluated for both scientific content and writing style by a committee of two faculty members and the thesis advisor. Students are required to defend their theses publicly to the academic community.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/geology-ms-st-geol-ms>

### Department Information:

Dept. of Earth and Environmental Science  
326 Beury Hall  
1901 N. 13th Street  
Philadelphia, PA 19122-6081  
eesgrad@temple.edu  
215-204-8227

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Administrative Assistant:*

Minh Nguyen  
minh@temple.edu  
215-204-8227

*Admissions:*

Dennis O. Terry, Jr., PhD  
Graduate Advisor  
doterry@temple.edu  
215-204-8226

*Chairperson:*

Nicholas Davatzes, PhD  
nicholas.davatzes@temple.edu  
215-204-2319

## Geoscience PhD

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Doctor of Philosophy in Geoscience.

### About the Program

The Department of Earth and Environmental Science offers a PhD program that includes graduate courses in the geosciences, weekly graduate seminars, qualifying exams, and research leading to a doctoral dissertation.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Full-time status is expected.

**Areas of Specialization:** Advanced courses and research opportunities are available in:

- Environmental geology, including ecohydrology, energy and land degradation, environmental geophysics, groundwater modeling, ice sheet stability and climate change, Karst hydrology, nanomineralogy and urban hydrology.
- Geochemistry, including nanomineralogy, paleontology-fossil provenance, planetary geology, and weathering and diagenesis.
- Sedimentary geology and paleontology, including coastal and aeolian dynamics, ichnology, paleontology-fossil provenance, paleopedology and modern soils, planetary geology and impact studies, and Precambrian geology.
- Structural geology, including geothermal energy and geomechanics.

**Job Prospects:** Graduates secure positions in academia, industry and government.

**Licensure/Certification:** For careers in industry, licensure is recommended after three years of on-the-job training. The Pennsylvania Professional Geologist Licensing Examination is administered by the National Association of State Boards of Geology (ASBOG®).

**Non-Matriculated Student Policy:** Doctoral courses are open only to matriculated students.

**Financing Opportunities:** Students are supported by a combination of Teaching and Research Assistantships, which typically provide a nine-month academic-year stipend and full tuition remission. Summer stipends are also available. Teaching and Research Assistants are expected to devote 20 hours per week to their duties. Teaching Assistants teach introductory geology labs and labs for majors. The duties for Research Assistants are determined by the primary research advisor. Both Teaching and Research Assistantships are awarded competitively. Funding after four years is not guaranteed.

Temple University also offers a limited number of two-year fellowships to support outstanding doctoral students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* January 15

*Spring:* October 15

For full consideration, applications must be submitted by the deadline. Late applications may be considered on a case-by-case basis. Applicants should target Fall entry as Spring admission is rare.

Program admissions are limited and competitive. Applicants are expected to contact the faculty in their area of interest prior to submitting an application.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence.

**Coursework Required for Admission Consideration:** Applicants are required to have taken courses in Geology to prepare them for graduate-level classes and instructing undergraduate majors. In addition, at least

one year of college-level Chemistry, Calculus, and either Physics or Biology is expected.

**Master's Degree in Discipline/Related Discipline:** A master's degree is recommended, but undergraduate research experience is also considered in evaluating applicants.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree, whether a BA or a BS, with a major in Geology or a related program in Science or Mathematics is required.

**Statement of Goals:** Identify your specific interest in Temple's Geoscience PhD program and the faculty member with whom you would like to work, and report on your research goal, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional. Scores above the 50th percentile in the quantitative and verbal sections are expected, but higher scores are more competitive.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

**Resume:** Current resume required.

**Writing Sample:** Applicants are required to submit a writing sample directly to the Graduate Chair of Earth and Environmental Science. Acceptable materials include the undergraduate thesis or research paper, master's thesis, and published journal articles in which the applicant is first author.

**Advanced Standing:** For students who enter the program with a subject-appropriate master's degree, coursework may be counted for advanced standing. Requests for advanced standing are evaluated on a case-by-case basis for appropriateness of the coursework and performance. Up to a maximum of 30 credits of formal graduate courses completed with a grade of "B" or better may be accepted.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 37, including 7 courses required in the Department of Earth and Environmental Science, with one additional course taken outside of the department, if desired

*Number of Credits Required Beyond the Master's:* 18, including 3 courses required in the Department of Earth and Environmental Science, with one additional course taken outside of the department, if desired

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
Select courses from the following to total 28 credits: <sup>1</sup>		28
EES 5011	Remote Sensing and GIS	

EES 5042	Coastal Processes	
EES 5101	Structural Geology (Graduate)	
EES 5401	Analytical Methods in Mineralogy	
EES 5402	X-ray Crystallography	
EES 5406	Nanoscience and the Environment	
EES 5434	Ecohydrology	
EES 5454	Introduction to Geophysics	
EES 5461	Low-Temperature Geochemistry	
EES 5462	Advanced Low-Temperature Geochemistry	
EES 5502	Ice and Global Climate	
EES 5601	Vertebrate Paleontology and Taphonomy	
EES 5625	Electron Optical Techniques	
EES 5702	Sedimentary Petrology	
EES 5725	Soils and Paleosols	
EES 5801	Quantitative Structural Geo	
EES 5802	Tectonics	
EES 5811	Planetary Geology	
EES 8000	Geology Seminar	
EES 8200	Graduate Geology Seminar	
EES 8411	Advanced Hydrogeology	
EES 8421	Groundwater Modeling	
<b>Elective</b> <sup>2</sup>		<b>3</b>
<b>Research Courses</b>		<b>6</b>
EES 9994	Preliminary Examination Preparation	
EES 9998	Pre-Dissertation Research / Elevation to Candidacy	
EES 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>37</b>

1

Select three of the courses if entering the PhD program with a master's degree.

2

The elective is selected in consultation with an advisor.

#### Culminating Events:

##### *Candidacy Assessment:*

Qualifying for PhD candidacy includes completion of coursework within the Department of Earth and Environmental Science, as well as demonstrations of subject area knowledge, skill and the ability to conduct research to define and investigate new questions. The assessment for candidacy consists of four parts:

1. Completion of a minimum of three departmental graduate courses in good standing
2. Successfully passing the written and oral components of the Preliminary Examination
3. Submission and acceptance of an NSF-style research proposal
4. Oral defense of the research proposal

##### *Dissertation:*

The Department of Earth and Environmental Science requires an original research dissertation as the culminating project in its PhD program.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/geoscience-phd-st-gesc-phd>

### Department Information:

Dept. of Earth and Environmental Science  
326 Beury Hall  
1901 N. 13th Street  
Philadelphia, PA 19122-6081  
eesgrad@temple.edu  
215-204-8227

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

#### *Administrative Assistant:*

Minh Nguyen  
minh@temple.edu  
215-204-8227

#### *Admissions:*

Dennis O. Terry, Jr., PhD  
Graduate Advisor  
doterry@temple.edu  
215-204-8226

#### *Chairperson:*

Nicholas Davatzes, PhD  
nicholas.davatzes@temple.edu  
215-204-2319

## High-Performance Computing for Scientific Applications PSM

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Professional Science Master's in High-Performance Computing for Scientific Applications.

### About the Program

Computation, in tandem with theory and experiment, is highly regarded in the advance of scientific knowledge and engineering practice. In recognition of a growing need for experts cross-trained in relevant computational sciences, applied mathematics, statistics and traditional scientific fields such as chemistry and physics, the Professional Science Master's (PSM) program in High-Performance Computing for Scientific Applications is targeted toward STEM graduates seeking to use high-performance computation as their primary research instrument in the physical sciences, life sciences and engineering.

The core curriculum for the High-Performance Computing for Scientific Applications PSM introduces students to the architecture of high-performance computing systems, mathematical techniques employed in high-performance computing, the software tools used in parallel calculations, and computational methods used in the sciences and engineering. A distinguishing feature of the program is its paired

emphasis on the algorithms and technology of high-performance computing in applications to problems in science and engineering. Cross-disciplinary techniques are emphasized, and learning through applications and individually designed projects are prioritized over theory.

**Time Limit for Degree Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis. Most of the classes are offered in the evenings or on weekends to enable full-time working professionals to enroll in the program. International students are required to register as full-time students.

**Interdisciplinary Study:** The program is interdisciplinary by nature.

**Accreditation:** Temple University is fully accredited by the Middle States Commission on Higher Education.

**Job Prospects:** Students in the program are connected to internships in industry and government laboratories by the PSM Scientific Advisory Committee. Graduates are then well prepared to compete for high-quality positions in industry, government laboratories and academia.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the Department of Mathematics.

**Financing Opportunities:** Financial assistance in the form of Research or Teaching Assistantships is not offered.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1; December 15 international  
*Spring Priority Deadline:* October 30, but open only to non-matriculated students who successfully completed PSM coursework in the Fall term

Applications submitted after the priority deadline will be considered for admission on a rolling basis.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters should be obtained from college/university faculty or faculty who are familiar with the applicant's competency. If the applicant has an established career in the field, the applicant's immediate supervisor should provide one of the letters.

**Coursework Required for Admission Consideration:** Applicants should have a strong background in one or more STEM fields: science, technology, engineering and mathematics.

**Bachelor's Degree in Discipline/Related Discipline:** The PSM program has been designed for recent graduates and professionals who have a bachelor's degree or equivalent in a STEM field.

**Statement of Goals:** In approximately 250 to 500 words, describe your interest in Temple's program, research goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58
- Duolingo: 110

**Resume:** Current resume required.

**Interview:** An in-person or Skype interview with the Program Director or members of the PSM Steering Committee is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the PSM program. The credits must be equivalent to coursework offered by the Department of Mathematics at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The PSM Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
MATH 5003	Professional Development Seminar <sup>1</sup>	1
MATH 5005	Ethics in Computing <sup>2</sup>	2
MATH 5061	Fundamentals of Computer Programming for Scientists and Engineers	4
MATH 5062	High Performance Computer Programming for Scientific Modeling	3
MATH 5063	Introduction to High-Performance Computing Technology for Scientists	4
MATH 5066	Mathematical Methods for High Performance Computing	3
<b>Electives</b>		<b>9</b>
Select three from the following: <sup>3</sup>		
BIOL 5411	Structural Bioinformatics I	
CHEM 5301	Quantum Chemistry	
CHEM 5302	Statistical Thermodynamics	
CIS 5524	Analysis and Modeling of Social and Information Networks	
CIS 5525	Neural Computation	
CIS 5526	Machine Learning	
CIS 9669	Distributed and Parallel Computer Systems	
MATH 8013	Numerical Linear Algebra I	
MATH 8014	Numerical Linear Algebra II	
MATH 8023	Numerical Differential Equations I	
MATH 8024	Numerical Differential Equations II	



MATH 8107	Mathematical Modeling for Science, Engineering, and Industry	
MATH 8700	Topics Computer Program	
MATH 8710	Topics Computer Program	
MATH 9200	Topics in Numerical Analysis	
MATH 9210	Topics in Numerical Analysis	
PHYS 5001	Introduction to Quantum Computing	
PHYS 8102	Statistical Mechanics	
<b>Capstone Course</b>		
MATH 9995	Capstone Project <sup>4</sup>	4
<b>Total Credit Hours</b>		<b>30</b>

1

BIOL 5506 Professional Development Seminar for PSM in Biotechnology serves as an approved alternative to MATH 5003.

2

BIOL 5511 Ethics in Bioinformatics serves as an approved alternative for MATH 5005.

3

Alternately, other elective courses may be taken at the 5000 level or higher, as approved by the program director.

4

With approval from their academic advisor, students may complete capstone credits over multiple academic terms.

**Culminating Event:***Capstone Research Project:*

The capstone research project (MATH 9995) provides students with the opportunity to develop, apply and demonstrate their skills in a professional high-performance computing environment. The project must be approved in advance by the PSM Steering Committee and requires a supervisor from either the Temple faculty or the PSM Scientific Advisory Committee. Students can undertake their research projects in whole or in part during student internships.

**Contacts****Program Web Address:**

<https://www.temple.edu/academics/degree-programs/high-performance-computing-for-scientific-applications-psm-st-hpc-psm>

**Department Information:**

Dept. of Mathematics  
638 Wachman Hall  
1805 N. Broad Street  
Philadelphia, PA 19122-6094  
cst.psm@temple.edu  
215-204-7842

**Submission Address for Application Materials:**

<https://cst.temple.edu/academics/graduate-programs/apply-now>

**Department Contacts:**

*Program Co-Directors:*  
Benjamin Seibold, PhD

seibold@temple.edu

Daniel Szyld, PhD  
szyld@temple.edu

*Graduate Chairperson:*

David Futer, PhD  
dfuter@temple.edu  
215-204-7854

*Department Chairperson:*

Brian Rider, PhD  
brian.rider@temple.edu  
215-204-7589

## Information Science and Technology MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Information Science and Technology.

### About the Program

The MS in Information Science and Technology (IS&T) program is designed for students without a background in programming and/or computer science to gain the skills to be prepared for careers in computing and information technology. This program allows students with undergraduate degrees from non-computing fields to add technical expertise in order to pursue the interdisciplinary career paths of the future. Students learn skills applicable to computer networking, database management, information security, mobile app development, software engineering, software testing and quality assurance, and web development. As preparation for studying these advanced topics, fast-paced, rigorous, introductory classes with a strong foundation in algorithms, data structures and programming are offered to MS in IS&T students.

Applicants to the MS in IS&T can choose between the on-campus and online programs, both of which follow the same curriculum and content. However, the delivery formats differ, as described below:

- The on-campus format is designed for students who prefer access to campus activities and live interaction with instructors and fellow students. Students can enroll full-time or part-time. While some courses may be offered online, most of the coursework is delivered in person over a full 16-week academic term during evening hours.
- The online format is designed for students who prefer the flexibility of online learning. Students can enroll full-time or part-time. Most courses are structured to include asynchronous assignments plus a once-a-week synchronous online class meeting.

The MS in IS&T program is designed for applicants with limited or no past experience in computer science. Candidates with some preparation and/or an undergraduate major in Computer Science or a closely related field should apply to the MS in Computer Science (p. 908) or MS in Computational Data Science (p. 903) programs.

**Time Limit for Degree Completion:** 5 years

**Campus Location:** Main and Online

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** Students may take up to three graduate IS&T-related courses in other departments. All such course clusters require prior approval of the MS in IS&T Program Director.

**Areas of Specialization:** Research interests of faculty include:

- Communication and networks
- Data warehousing, filtering and mining
- Enterprise system development and resource management
- Ethics and social issues related to technology
- Knowledge management
- Management information and database systems
- Security and privacy
- Software engineering
- System development and process management
- Usability engineering

**Job Prospects:** Graduates often find employment in computer networking, database management, information security, mobile app development, software engineering, software testing and quality assurance, and web development. Many become involved in the design and implementation of new applications software or the planning and evaluation of computer-based systems. Prospective employers include the government, universities and colleges, and nonprofit agencies, as well as information technology organizations, computer centers or computer manufacturers in industry.

**Non-Matriculated Student Policy:** Non-matriculated students are permitted to take a maximum of two graduate-level CIS courses.

**Financing Opportunities:** Assistantships provide a stipend and full-time tuition to qualified students, but are typically reserved for doctoral students.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1; December 15 international  
*Spring Priority Deadline:* October 30; August 1 international

Applications submitted after the priority deadline will be considered for admission on a rolling basis. Applications are reviewed as they are received.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence. If out of school for an extended period of time, the applicant should request letters from supervising employers or professional colleagues who can speak to academic abilities, communication skills and/or professional competence.

**Coursework Required for Admission Consideration:** Applicants are expected to have some interest in and exposure to programming (e.g., through free online coding tutorials in C/C++, Java and/or Python).

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: Not required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate-level IS&T coursework completed no more than five years prior to the student's matriculation in the graduate program may be transferred into the MS in IS&T program. The student must have earned an "A" in the course, and must submit a rationale for applying the credits to the current graduate program. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

### Required Courses:

Code	Title	Credit Hours
<b>Core Courses</b>		
Select three from the following:		9
CIS 5002	Database Design & Programming	
CIS 5015	Scripting for Sciences and Business	
CIS 5016	Data Structures and Objects	
CIS 5017	Operating Systems and Architecture	
<b>Electives</b>		21
Select seven from the following: <sup>1</sup>		
CIS 5107	Computer Systems Security and Privacy	
CIS 5208	Knowledge Management	
CIS 5210	Seminar in Information Science and Technology	
CIS 5221	Introduction to Mobile Application Development	
CIS 5274	Software Quality Assurance and Testing	
CIS 5275	Software Project Management	
CIS 5301	Advanced Database Management Systems	
CIS 5303	Usability Engineering	
CIS 5304	Network Technologies	
CIS 5306	Software Engineering	
CIS 5405	Introduction to Digital Forensics	
CIS 5410	Advanced Seminar in Information Science and Technology	

CIS 5590 Topics in Computer Science

**Total Credit Hours** 30

1

Seven electives are typically selected from the identified CIS elective courses. Alternately, the core course not taken above may be completed or other graduate-level CIS courses or courses outside the department are taken with the approval of the MS in IS&T Program Director. Note that a maximum of three courses may be taken from other departments.

**Culminating Event:** Students satisfactorily complete coursework to earn the MS in IS&T degree.

## Contacts

### Program Web Address:

<https://cst.temple.edu/istonline>

### Department Information:

Dept. of Computer and Information Sciences  
304 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
cisadmit@temple.edu  
215-204-8450

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

#### Admissions:

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

#### Graduate Advisor:

Dominique M. Klinger, PhD  
dklinger@temple.edu  
215-204-3072

#### Graduate Chairperson:

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

#### Department Chairperson:

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

## Mathematics MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Mathematics.

### About the Program

The Department of Mathematics offers graduate work leading to the Master of Science degree. The aim of the MS program is to provide students with a foundation sufficient to pursue careers in mathematics in

industry, government or education. The program offers opportunities to conduct original research under the supervision of a faculty member.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered before 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interest in computer and information sciences, physical and life sciences, statistics and engineering.

**Affiliation(s):** The Mathematics program at Temple University is affiliated with the American Mathematical Society and the Mathematical Association of America.

**Study Abroad:** Department faculty are active internationally and sometimes travel overseas for conferences and extended research visits. In some cases, students may participate in these activities.

**Accreditation:** This program adheres to accepted professional standards of mathematics education and research.

**Areas of Specialization:** The department has approximately 25 faculty members actively involved in research and graduate education. With a graduate student body of less than 40, we are a program of moderate size with a high faculty/student ratio. Thus, we provide students with unique opportunities for flexible program design and ample interaction with faculty. Classes are small and are held in an informal atmosphere enabling students and faculty to work closely together.

The department offers a great variety of choices for areas of specialization. A strong research presence exists in the following areas: algebra, computational mathematics, differential geometry and topology, geometric group theory, global geometry, harmonic analysis, invariant theory, mathematical biology, mathematical physics, mathematics of materials, numerical analysis, partial differential equations, probability, representation theory and several complex variables. Both prospective and matriculated students are encouraged to browse faculty webpages and contact faculty directly for more detailed information regarding areas of specialization and opportunities for further research.

**Job Prospects:** Graduates either continue advanced educational programs or pursue employment in industry, education, or government laboratories and agencies.

**Non-Matriculated Student Policy:** Non-matriculated students must coordinate coursework with the Graduate Chair.

**Financing Opportunities:** Teaching Assistants teach basic undergraduate mathematics courses, ranging from remedial courses through calculus. The standard teaching load is 20 hours per term. In determining the load, credit is given for more difficult and challenging teaching assignments. Research Assistantships are sometimes available, typically through special projects and grants. Support generally includes a stipend and tuition of up to 9 credits per term.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall Priority Deadline:* March 1

Applications submitted after the priority deadline will be considered for admission on a rolling basis.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from individuals who are well acquainted with the applicant's abilities and achievements in mathematics and related areas, particularly former instructors of mathematics courses and projects. Letters from instructors in related areas such as computation or the physical and life sciences are also appropriate. In certain cases, letters from employment supervisors or project leaders may be appropriate as well.

**Coursework Required for Admission Consideration:** Applicants must have completed fundamental undergraduate mathematics courses.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must hold a baccalaureate degree from an accredited college or university.

**Statement of Goals:** Describe your strengths and motivation, the purpose for applying to a graduate program in mathematics, and why you are interested in the intended degree. This forum should be used to make your strongest case for admission and, thus, should be well written.

**Standardized Test Scores:**

GRE General Test or GRE Subject Test in Mathematics: The GRE General Test is not required and will not be considered. The GRE Subject Test in Mathematics is optional.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Test Waivers:** An applicant who wants to have certain admission requirements waived must contact the department directly. Requests are considered by the department on a case-by-case basis. In some cases, an additional appeal to the Graduate School may be required. In such a case, the department makes a preliminary determination for the applicant and, if positive, issues a supporting letter to the Graduate School on the applicant's behalf.

**Resume:** Current resume required.

**Transfer Credit:** Students who have taken graduate courses at other institutions or at Temple University prior to matriculation may apply for transfer credit. All applications for transfer credit are reviewed by the Graduate Committee, which has the option to deny credit if the courses involved are deemed substantially inferior to similar courses offered by the Department of Mathematics. The credits must be equivalent to coursework offered at Temple, with a grade of "B" or better having been earned in the course(s). No course completed more than five years before the date of application will be awarded credit, nor will

courses substantially similar to courses taken since matriculation earn transfer credit. Transfer credit is only available for graduate-level courses in mathematics or those in related fields that have a substantial mathematical content. Applications for transfer credit are not considered until the student has completed at least three graduate courses totaling at least 9 credits. The maximum number of transfer credits awarded is 6.

## Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

The Master of Science degree requires 10 graduate courses at the 5000 level or higher. The program of study must be designed in coordination with a Mathematics faculty advisor and approved by the departmental Graduate Committee. With the approval of the faculty advisor and Graduate Committee, relevant courses from departments other than Mathematics may be included.

The MS degree is offered with an optional concentration in Applied and Computational Mathematics. The concentration is designed for students interested in incorporating advanced study in mathematical and computational methods into the Master of Science program. Students pursuing this concentration complete at least 15 credits of coursework in applied and computational mathematics within their 30-credit degree program.

**Culminating Events:**

After satisfying the 30-credit course requirement, students may choose between the following three options as the culminating event for the MS degree:

- Master's Thesis
- Master's Comprehensive Examination
- Master's Pass on the PhD Comprehensive Examination

*Master's Thesis:*

Students who choose to submit a master's thesis must select a faculty advisor and a thesis advisory committee. These arrangements are subject to the approval of the Mathematics Graduate Committee. The date, time and location of a thesis defense are set by the Graduate Chair in consultation with the student's advisory committee.

*Master's Comprehensive Examination:*

For students selecting this option, a written Master's Comprehensive Examination is composed by at least two departmental Graduate Faculty. The topics covered should correspond to the student's program of study as approved by the Graduate Committee. The exam is graded by at least two Mathematics faculty members, with grades of either Pass or Fail. Students interested in taking the Master's Comprehensive Examination are required to make a written request to the Graduate Chair at least four weeks in advance. If the examination is failed, it may be taken again once, or the student may attempt a master's pass on the PhD Comprehensive Examination.

*Master's Pass on the PhD Comprehensive Examination:*

Students choosing this option must take three of the separate 25-point sections of the written PhD Comprehensive Examination. A student who achieves a total score of at least 40 on the three sections of the examination, with no individual section score below 8, obtains a master's pass on the exam and has fulfilled the examination requirement for the MS degree. If one of the individual exam scores falls below 8 points, that exam may be repeated once, or the exam in a different topic may be

attempted once, or the student may take the Master's Comprehensive Examination described above. Such arrangements are subject to approval by the Graduate Committee. The case of a student failing the comprehensive exam by a small margin is discussed by the department's Graduate Committee, which takes the student's whole academic record into account in its decision.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/mathematics-ms-st-math-ms>

### Department Information:

Dept. of Mathematics  
638 Wachman Hall  
1805 N. Broad Street  
Philadelphia, PA 19122-6094  
[grad.math@temple.edu](mailto:grad.math@temple.edu)  
215-204-7842

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Graduate Chairperson:*  
David Futer, PhD  
[dfuter@temple.edu](mailto:dfuter@temple.edu)  
215-204-7854

*Department Chairperson:*  
Brian Rider, PhD  
[brian.rider@temple.edu](mailto:brian.rider@temple.edu)  
215-204-7589

## Mathematics PhD

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Doctor of Philosophy in Mathematics.

### About the Program

The PhD program in Mathematics prepares students for careers that depend on advanced mathematics. These include broad directions such as advanced research and development, education, government, industry and national laboratories. For new students, the program offers a repertoire of coursework and research opportunities that eases the transition from undergraduate to advanced graduate studies. Courses provide a sound mathematical background while helping beginning students to mature mathematically. Naturally, individuals with enough maturity and knowledge need not take these more basic courses.

In the Mathematics Department, our philosophy is to participate actively in our students' development as future professionals whose work involves advanced mathematics. We take pride in caring for our students. Our faculty are accessible and willing to talk mathematics with any inquiring student. It is this attitude that most distinguishes our program from other mathematics graduate programs. While requiring excellence, we work hard at providing the environment to achieve it.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** Students complete the degree program through classes offered before 4:30 p.m. The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The program encourages interdisciplinary coursework, research and interactions among faculty and students with interest in computer and information sciences, physical and life sciences, statistics and engineering.

**Affiliation(s):** The Mathematics program at Temple University is affiliated with the American Mathematical Society and the Mathematical Association of America.

**Study Abroad:** Department faculty are active internationally and sometimes travel overseas for conferences and extended research visits. In some cases, students may participate in these activities.

**Ranking:** The PhD program is designed to provide opportunities for education and research that are commensurate with national standards. Faculty are active in professional meetings and initiatives organized by the American Mathematical Society and the Mathematical Association of America.

**Accreditation:** This program adheres to accepted professional standards of mathematics education and research.

**Areas of Specialization:** The department offers a great variety of choices for areas of specialization, with a strong research presence in the following areas:

- Algebra
- Algebraic and analytic number theory
- Combinatorics
- Computational mathematics
- Differential and computational geometry and topology
- Global geometry
- Harmonic analysis
- Mathematical physics
- Mathematics of materials
- Numerical analysis
- Partial differential equations
- Related probability and mathematical statistics
- Several complex variables

Both prospective and matriculated students are encouraged to browse faculty webpages and contact faculty directly for more detailed information regarding areas of specialization and opportunities for further research.

**Job Prospects:** Graduates either continue advanced educational programs or pursue employment in industry, education, or government laboratories and agencies.

**Non-Matriculated Student Policy:** Non-matriculated students must coordinate coursework with the Graduate Chair.

**Financing Opportunities:** Teaching Assistants teach basic undergraduate mathematics courses, ranging from remedial courses through calculus. The standard teaching load is 20 hours per term. In

determining the load, credit is given for more difficult and challenging teaching assignments. Research Assistantships are sometimes available, typically through special projects and grants. Support generally includes a stipend and tuition of up to 9 credits per term.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* December 15

For full consideration, applications must be submitted by the deadline. Late applications may be considered on a case-by-case basis.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from individuals who are well acquainted with the applicant's abilities and achievements in mathematics and related areas, particularly former instructors of mathematics courses and projects. Letters from instructors in related areas such as computation or the physical and life sciences are also appropriate. In certain cases, letters from employment supervisors or project leaders may be appropriate as well.

**Coursework Required for Admission Consideration:** Applicants must have completed fundamental undergraduate mathematics courses. Prospective students are encouraged to contact the department to discuss their background.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must hold a baccalaureate degree from an accredited college or university.

**Statement of Goals:** Describe your strengths and motivation, the purpose for applying to a graduate program in mathematics, and why you are interested in the intended degree. This forum should be used to make your strongest case for admission and, thus, should be well written.

### Standardized Test Scores:

GRE General Test or GRE Subject Test in Mathematics: The GRE General Test is not required and will not be considered. The GRE Subject Test in Mathematics is optional.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Test Waivers:** An applicant who wishes to have certain admission requirements waived must contact the department directly. Requests are considered by the department on a case-by-case basis. In some cases, an additional appeal to the Graduate School may be required. In such a case, the department makes a preliminary determination for the applicant

and, if positive, issues a supporting letter to the Graduate School on the applicant's behalf.

**Resume:** Current resume required.

**Advanced Standing:** Students who have taken graduate courses at other institutions or at Temple University prior to matriculation may apply for advanced standing credit. All applications for advanced standing credit are reviewed by the Graduate Committee, which has the option to deny credit if the courses involved are deemed substantially inferior to similar courses offered by the Department of Mathematics. The credits must be equivalent to coursework offered at Temple, with a grade of "B" or better having been earned in the course(s). No course completed more than five years before the date of application will be awarded credit, nor will courses substantially similar to courses taken since matriculation earn advanced standing credit. Advanced standing credit is only available for graduate-level courses in mathematics or those in related fields that have a substantial mathematical content. Applications for advanced standing credit are not considered until the student has completed at least three graduate courses totaling at least 9 credits. The maximum number of advanced standing credits awarded is 30.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 54

### Required Courses:

Students are required to take at least 16 graduate courses, which are chosen with the advice and consent of the student's advisor. These courses should be taken during the first three years of graduate study and include foundational 8000-level courses for the topics in which the student plans to take the PhD Comprehensive Examination. Students who have had graduate courses in these subjects prior to admission may omit some or all of the courses with the consent of their advisor and the Graduate Committee.

Students also take six additional credit hours of:

Code	Title	Credit Hours
MATH 9994	Preliminary Examination Preparation	1-6
MATH 9998	Pre-Dissertation Research / Elevation to Candidacy	1-6
MATH 9999	Dissertation Research	2
		minimum

### Culminating Events:

#### *Written Comprehensive Examination:*

The PhD Comprehensive Examination is a written exam comprised of three separate sections selected from the following areas:

- Algebra
- Applied Mathematics
- Complex Analysis
- Differential Geometry and Topology
- Partial Differential Equations
- Real Analysis

Students can choose any three of these sections for their examination. After exams in three different topics have been attempted, an exam in a fourth topic can only be taken under exceptional circumstances, and

only after specific approval by the Graduate Committee. Each section is a three-hour test based primarily on the corresponding two-term 8000-level graduate course sequence. The separate section tests are given on different days, during one two-week period, twice a year: once in August just before the beginning of the Fall term, and once in January during the two weeks prior to the beginning of the Spring term. Students do not have to take all three of the section tests during the same two-week period. Each section test may be repeated once to obtain a higher grade.

Each of the three-hour section tests is further divided into two parts. Part I contains four questions, of which the student is asked to answer three. These questions are designed to test mastery of the facts of the subject. Part II contains three questions, of which two are to be answered. These questions test the ability to solve in-depth problems in the subject.

Students should begin taking the components of the Comprehensive Exam as soon as possible after finishing the corresponding coursework. Students are expected to complete and pass the Comprehensive Examination by August of their second year of study. While some delay in this schedule may be permitted, under exceptional circumstances, students not making good progress toward completing and passing their Comprehensive Examination in a timely fashion will be asked to leave the PhD program.

Incoming students may, with approval of the Graduate Chair, take up to three of the written PhD Comprehensive Examination sections once prior to their first term of enrollment. Upon request by the student, any of these pre-enrollment attempts can be removed from the student's record.

Each section is graded independently by two faculty members, using a scale of 0 to 25. The grades are compared and reconciled in the event of a discrepancy. A total score of at least 60, with a score on each individual section test of at least 13, is required to pass. If a student falls slightly short of this standard, the Graduate Faculty may, at their discretion, recommend a grade of pass based on the whole of the student's academic record.

A student who achieves a total score of at least 40 on the three sections of the PhD Comprehensive Examination, with no individual section score below 8, has obtained a master's pass on the examination and has fulfilled the examination requirement for the MS degree. If one of the individual exam scores falls below 8 points, that exam may be repeated once, or the exam in a different topic may be attempted once, or the student may take the Master's Comprehensive Examination. Such arrangements are subject to approval by the Graduate Committee, and if a student falls slightly short of the required standards, then the Graduate Faculty may, at their discretion, recommend a grade of pass, basing their decision on the student's entire academic record.

#### *Preliminary Examination:*

The preliminary examination is a two-hour oral exam. It should be taken by the end of the sixth term and must be passed by the end of the seventh term. The PhD preliminary examination can be repeated, in whole or in part, only once. No student is permitted to take the preliminary examination before passing the written PhD Comprehensive Examination and satisfying the foreign language requirement.

The student chooses a chief examiner with the advice and consent of the Mathematics Graduate Committee and with the consent of the proposed chief examiner. The chief examiner, in accepting their assignment, implicitly offers to be the student's dissertation supervisor if the examination is passed. Approximately one-half of the preliminary examination is conducted by the chief examiner, who asks questions in the area that the student has chosen as a specialty. The other half of

the examination is devoted to questions asked by other faculty members on two or more elementary topics related to the area of specialization. The exact description of the elementary topics to be included in the examination is determined by the chief examiner, who is also responsible for assigning examiners to cover the topics. The examination committee consists of the chief examiner, the examiners for the elementary topics, and any other faculty who choose to attend. All faculty in attendance may vote on the outcome of the examination. The examination is considered passed if the chief examiner and at least one-half of the other faculty present vote in favor of passing.

Students who are preparing to write their preliminary examination should confirm a time and date with the chair of their Doctoral Advisory Committee and register with the department. The student and chair receive confirmation of the time, date, room and proctor for the examination.

#### *Dissertation:*

The candidate's dissertation must be a distinctive and original contribution to research in mathematics. It must be an individual work, with only one author. Previously published work by the candidate may be included, if it represents research done while the student was enrolled in the PhD program in Mathematics at Temple University and was not used to obtain any other degree. Joint work that cannot be attributed to the candidate alone must not be included in the body of the dissertation, but may be attached as an appendix. All previously published work must be logically connected and integrated into the dissertation, with a common introduction, conclusion and bibliography. Existing copyrights must not be violated.

Preparation of the dissertation is supervised by the student's Doctoral Advisory Committee (DAC). This committee must include at least three Temple graduate faculty, two of whom must be in the Mathematics Department. The chair of the committee must be a member of the Temple University Mathematics Department. The DAC may include members of other Temple University departments. It is also possible for faculty from other universities or expert advisors employed in non-university settings to be included in the DAC.

The first step in preparing the dissertation is to write a dissertation proposal, which must be approved by the candidate's DAC. The proposal is kept on file, and if it becomes necessary to alter the proposal, the changes should be approved by the DAC and filed with the proposal.

The dissertation defense may be attended by faculty and graduate students from Temple University or other institutions, as well as mathematicians or scientists employed in a non-academic setting. The candidate's Dissertation Examining Committee (DEC) must attend the defense. This committee includes the candidate's DAC and at least one additional member, who must be faculty of some Temple University department other than Mathematics or faculty at another university. The DEC meets at the conclusion of the dissertation defense and decides, by majority vote, if the candidate was successful.

If a student needs to change a member of a committee, the new member must be approved by the Mathematics Graduate Committee and registered with the department and the Graduate School.

When the dissertation is deemed complete by the candidate and the DAC, a defense is scheduled. Students who are preparing to defend their dissertation should confirm a date and time with their DAC and register with the department at least 20 days before the defense is to be

scheduled. The Graduate Chair arranges the date, time and room. The appropriate forms are forwarded to the student.

This dissertation defense must be announced in writing at least 10 days in advance of its occurrence. Copies of the announcement must be directed to each member of the candidate's DEC, each faculty member of the Mathematics Department, the Dean of the College of Science and Technology, and the Graduate School. Copies of the announcement are to be posted at the Department Office, the College Office, and on the Graduate School website.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/mathematics-phd-st-math-phd>

### Department Information:

Dept. of Mathematics  
638 Wachman Hall  
1805 N. Broad Street  
Philadelphia, PA 19122-6094  
grad.math@temple.edu  
215-204-3928

### Submission Address for Application

#### Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Graduate Chairperson:*  
David Futer, PhD  
dfuter@temple.edu  
215-204-7854

*Department Chairperson:*  
Brian Rider, PhD  
brian.rider@temple.edu  
215-204-7589

## Physics MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Physics.

### About the Program

The objective of the MS degree program in Physics is to provide advanced training in Physics sufficiently broad to permit the graduate to pursue a range of technical careers. Students choose to pursue the Coursework Track or Thesis Track to complete the MS degree.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Job Prospects:** The program is dedicated to producing well-trained scientists prepared for careers as high school science teachers, technical writers, or members of a technical support staff.

**Non-Matriculated Student Policy:** Non-matriculated students are restricted to taking the following courses:

Code	Title	Credit Hours
PHYS 5101	Analytical Mechanics	
PHYS 5301	Electromagnetic Theory	
PHYS 5501	Mathematical Physics	

If the student applies to and is accepted into the program, the courses taken, up to 9 credits, may be applied toward the degree requirements.

**Financing Opportunities:** Financial aid in the form of Teaching Assistantships, Research Assistantships, and Temple University Fellowships is reserved largely for PhD students. Applicants with a bachelor's degree who wish to earn a doctorate should apply to the PhD program, not the MS program. Students in the PhD program normally complete all of the requirements for the MS in their first two years and may request the MS degree at that time while continuing in the PhD program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1; December 15 international  
*Spring Priority Deadline:* October 30; August 15 international

Applications submitted after the priority deadline will be considered for admission on a rolling basis.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members or scientists familiar with the applicant's academic and scientific capabilities.

**Coursework Required for Admission Consideration:** Applicants should have successfully completed coursework typically required for a bachelor's degree in Physics.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Physics is typically required. A certified transcript is required from each institution previously attended by the applicant.

**Statement of Goals:** In one to two pages, address your specific interest in Temple's program, research and career goals, and academic and research achievements.

### Standardized Test Scores:

GRE: General Test required. Subject Test in Physics strongly recommended, but not required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S.



institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the program. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The Graduate Program Committee must approve all requests for transfer credit. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

### Thesis Track

Code	Title	Credit Hours
<b>Core Courses</b>		
PHYS 5101	Analytical Mechanics	3
PHYS 5301	Electromagnetic Theory	3
PHYS 5501	Mathematical Physics	3
PHYS 5701	Quantum Mechanics I	3
PHYS 5702	Quantum Mechanics II	3
PHYS 8102	Statistical Mechanics	3
PHYS 8702	Solid State Physics	3
PHYS 8703	Nuclear and Elementary Particle Physics	3
<b>Research Courses</b>		
PHYS 9996	Master's Thesis Research	3
Select 3 credits of additional coursework from the following:		3
PHYS 8004	Problems in Experimental Physics	
PHYS 8005	Problems in Theoretical Physics	
PHYS 9996	Master's Thesis Research	
<b>Total Credit Hours</b>		<b>30</b>

### Coursework Track

Code	Title	Credit Hours
<b>Core Courses</b>		
PHYS 5101	Analytical Mechanics	3
PHYS 5301	Electromagnetic Theory	3
PHYS 5501	Mathematical Physics	3
PHYS 5701	Quantum Mechanics I	3
PHYS 5702	Quantum Mechanics II	3
PHYS 8102	Statistical Mechanics	3
PHYS 8702	Solid State Physics	3
PHYS 8703	Nuclear and Elementary Particle Physics	3

<b>Additional Coursework</b> <sup>1</sup>	<b>6</b>
<b>Total Credit Hours</b>	<b>30</b>

1

The balance of coursework is identified in consultation with the graduate advisor and subject to the approval of the Graduate Program Committee. No more than 3 credits may be taken in these independent study courses: PHYS 8004 Problems in Experimental Physics; PHYS 8005 Problems in Theoretical Physics; or PHYS 9998 Pre-Dissertation Research / Elevation to Candidacy.

### Culminating Events:

*Thesis:*

A master's thesis is required for students in the Thesis Track, but not for students in the Coursework Track. The thesis is based on the student's research and approved in accordance with the policies of the Department of Physics and the Graduate School.

*Comprehensive Examination:*

The MS comprehensive examination is required for students in the Coursework Track, but not for students in the Thesis Track. The exam, which tests the student's mastery of undergraduate and beginning graduate physics, consists of a three-part written exam and an oral exam. General subject areas covered by the examination include classical electromagnetic theory, classical mechanics, mathematical physics, modern physics, quantum mechanics, statistical mechanics and thermodynamics.

MS students in the Coursework Track are required to take the comprehensive examination in the summer at the end of their first year of full-time graduate study. They are tested on the subject matter in six core courses: PHYS 5101, PHYS 5301, PHYS 5501, PHYS 5701, PHYS 5702, and PHYS 8102. In the event of failure, the exam may be retaken once. Any student who fails a second time is dropped from the graduate program.

## Contacts

### Department Web Address:

<https://www.temple.edu/academics/degree-programs/physics-ms-st-physics>

### Department Information:

Dept. of Physics  
406 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
physgrad@temple.edu  
215-204-7634

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Admissions Chair:*

Martha Constantinou, PhD  
marthac@temple.edu  
215-204-2878

*Graduate Chairperson:*

Rongjia Tao, PhD  
 rongjia.tao@temple.edu  
 215-204-7651

*Department Chairperson:*  
 Peter Riseborough, PhD  
 peter.riseborough@temple.edu  
 215-204-7634

## Physics PhD

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Doctor of Philosophy in Physics.

### About the Program

The objective of the PhD program in Physics is to provide both a broad understanding of foundational areas of Physics and intensive training and experience in an important area of current research. A primary requirement for the degree is an original and significant research contribution, which is presented in the PhD dissertation.

**Time Limit for Degree Completion:** 7 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Job Prospects:** The program is intended to produce well-trained physicists, who are qualified for careers as research scientists in government and industrial laboratories or as university faculty members.

**Non-Matriculated Student Policy:** Non-matriculated students are restricted to taking the following courses:

Code	Title	Credit Hours
PHYS 5101	Analytical Mechanics	
PHYS 5301	Electromagnetic Theory	
PHYS 5501	Mathematical Physics	

If the student applies to and is accepted into the program, the courses taken, up to 9 credits, may be applied toward the degree requirements.

**Financing Opportunities:** Financial aid is available in the form of Teaching and Research Assistantships. The principal duties of a Teaching Assistant include laboratory instruction, grading of lab reports, and tutoring of students enrolled in introductory physics courses. Research Assistants are assigned to a faculty member, typically the thesis advisor, who is engaged in an externally funded research project and who determines the students' duties. Both Teaching and Research Assistantships provide tuition, a stipend for living expenses, and health insurance.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* January 15; December 15 international  
*Spring:* September 15; August 15 international

For full consideration, applications must be submitted by the deadline. Late applications may be considered in exceptional cases.

*APPLY ONLINE to this graduate program.*

**Letters of Reference:**

*Number Required:* 3

*From Whom:* Letters of recommendation should be obtained from college/university faculty members or scientists familiar with the applicant's academic and scientific capabilities.

**Coursework Required for Admission Consideration:** Applicants should have successfully completed coursework typically required for a bachelor's degree in Physics.

**Master's Degree in Discipline/Related Discipline:** A master's degree is not required.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Physics is typically required. A certified transcript is required from each institution previously attended by the applicant.

**Statement of Goals:** In one to two pages, address your specific interest in Temple's program, research and career goals, and academic and research achievements.

**Standardized Test Scores:**

GRE: General Test required. Subject Test in Physics strongly recommended, but not required.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

**Resume:** Current resume required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the program. The credits must be equivalent to coursework offered at Temple, and the grade must be a "B" or better in order to transfer. The Graduate Program Committee must approve all requests for transfer credit. The maximum number of credits a student may transfer is 6.

**Advanced Standing:** Students who enter the PhD program in Physics with a master's degree in Physics or a closely related field may be considered for advanced standing. The Graduate Program Committee recommends the awarding of advanced standing on a case-by-case basis. The maximum number of advanced standing credits awarded is 33.

### Program Requirements

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate:* 38

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
PHYS 5002	Physics Research and Ethics	1
PHYS 5101	Analytical Mechanics	3
PHYS 5301	Electromagnetic Theory	3
PHYS 5501	Mathematical Physics	3
PHYS 5701	Quantum Mechanics I	3
PHYS 5702	Quantum Mechanics II	3
PHYS 8102	Statistical Mechanics	3
PHYS 8702	Solid State Physics	3
PHYS 8703	Nuclear and Elementary Particle Physics	3
<b>Electives</b>		<b>6</b>
Select two from the following:		
PHYS 5302	Advanced Electromagnetic Theory	
PHYS 5502	Computational and Mathematical Physics	
PHYS 8020	Topical Seminar I	
PHYS 8701	Quantum Field Theory	
PHYS 8704	Many Electron Theory	
PHYS 8705	Advanced Topics in Nuclear and Particle Physics or any new course designated as PHYS 870X	
<b>Research Courses</b> <sup>1</sup>		<b>7</b>
PHYS 9994	Preliminary Examination Preparation <sup>2</sup>	
PHYS 9998	Pre-Dissertation Research / Elevation to Candidacy	
PHYS 9999	Dissertation Research	
<b>Total Credit Hours</b>		<b>38</b>

1

The combined number of credits of PHYS 9994, PHYS 9998, and PHYS 9999 must be at least 7, with a minimum of 1 credit of PHYS 9994 and a minimum of 2 credits of PHYS 9999 required.

2

Students typically take PHYS 9994 in the fourth academic term of full-time graduate study.

#### Culminating Events:

##### *Preliminary Examination:*

For elevation to candidacy for the PhD degree, the student must pass a written and oral preliminary examination covering undergraduate- and master's-level physics. The written part of the exam is typically taken at the end of the summer of the first year of study on information from six core courses: PHYS 5101, PHYS 5301, PHYS 5501, PHYS 5701, PHYS 5702, and PHYS 8102. The oral part, also known as the Early Research Progress Exam, is given by the student's research committee at the end of the fifth term of study. In the event of failure, the exam may be retaken once six months later. The Department or Graduate Chair is present for the second attempt. Any student who fails a second time is dropped from the graduate program.

##### *Dissertation:*

A topic for the PhD dissertation is selected in consultation with a faculty member who agrees to serve as the dissertation supervisor. For elevation to candidacy, the student must submit a dissertation proposal that meets the approval of the Graduate Program Committee and the Graduate School. The completed dissertation is submitted to the department before

the final examination, in which the dissertation is presented and defended by the candidate in an oral examination.

## Contacts

### Department Web Address:

<https://www.temple.edu/academics/degree-programs/physics-phd-st-physics-phd>

### Department Information:

Dept. of Physics  
406 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
physgrad@temple.edu  
215-204-7634

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

#### *Admissions Chair:*

Martha Constantinou, PhD  
marthac@temple.edu  
215-204-2878

#### *Graduate Chairperson:*

Rongjia Tao, PhD  
rongjia.tao@temple.edu  
215-204-7651

#### *Department Chairperson:*

Peter Riseborough, PhD  
peter.riseborough@temple.edu  
215-204-7634

## Scientific Writing PSM

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Professional Science Master's in Scientific Writing.

### About the Program

In science, the ability to write clearly and succinctly is a skill in demand by organizations as diverse as nonprofit organizations, pharmaceutical companies and news outlets. The primary objective of the PSM in Scientific Writing program is to enable students with diverse backgrounds in science, technology, engineering and mathematics (STEM) to develop the expertise to pursue medical and scientific writing jobs in the STEM fields. In addition, individuals currently employed in STEM areas are offered the opportunity to enhance and broaden their skills for their professional advancement.

The Scientific Writing PSM program offers specific and focused instruction in a wide range of scientific writing genres, as well as enables students to develop their communication skills. Students also experience scientific writing in practice, both through classroom instruction and an internship that provides an opportunity for direct training by directors of regulatory affairs in pharmaceutical companies, medical writers,

practicing scientists, professionals working for scientific/medical journals, publishers and the like.

The program is a collaborative effort of Temple faculty in the College of Science and Technology and the Lew Klein College of Media and Communication. Students may satisfy the degree requirements by also taking electives in Engineering, English, Health Policy and Management, Marketing, Pharmacy Quality Assurance, Philosophy and Statistics.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Interdisciplinary Study:** The degree program is inherently interdisciplinary in commingling science coursework with writing coursework.

**Accreditation:** Temple University is fully accredited by the Middle States Commission on Higher Education.

**Areas of Specialization:** The Scientific Writing PSM program offers two concentrations:

- Marketing/Regulatory Writing
- Popular Scientific Writing

**Job Prospects:** Recent data from the United States Labor Department, Bureau of Labor Statistics, shows that technical writer jobs are growing at a faster rate than medical scientist jobs. Graduates of the Scientific Writing PSM program are prepared to use scientific writing skills in all relevant areas, including the STEM disciplines, Contract Research Organizations (CRO), public health and policy, and science communications.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the Biology Department.

**Financing Opportunities:** Financial assistance in the form of Research or Teaching Assistantships is not offered at this time.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall Priority Deadline:* March 1; December 15 international  
*Spring Priority Deadline:* October 30; September 1 international

Applications submitted after the priority deadline will be considered for admission on a rolling basis. Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within four to six weeks of receipt of all supporting application documents.

*APPLY ONLINE to this graduate program.*

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters should be obtained from college/university faculty or faculty who are familiar with the applicant's competency. If the applicant has an established career in a related field, the applicant's immediate supervisor should provide one of the letters.

**Coursework Required for Admission Consideration:** Applicants should have a strong background in one or more STEM fields: science, technology, engineering and mathematics.

**Bachelor's Degree in Discipline/Related Discipline:** The Scientific Writing PSM program has been designed for professionals who have a bachelor's degree or equivalent in a STEM field.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in the Scientific Writing PSM program, career goals, and academic and professional achievements.

### Standardized Test Scores:

GRE: Optional

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- PTE Academic: 61
- Duolingo: 110

**Resume:** Current resume required.

**Interview:** An in-person or Skype interview is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Scientific Writing PSM program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The PSM in Scientific Writing Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 30

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
BIOL 5505	Ethics Regulation and Policy in Biotechnology <sup>1</sup>	3
BIOL 5522	Introduction to Scientific and Regulatory Writing <sup>1</sup>	3
BIOL 5532	Introduction to Grant Writing <sup>1</sup>	3
BIOL 5533	Communicating Science to a Broader Audience / Non-Scientists <sup>1</sup>	3
JRN 5710	Seminars in Communication <sup>1,2</sup>	4
<b>Electives<sup>3</sup></b>		<b>12</b>
<b>Capstone Course</b>		
BIOL 9995	Capstone Project	2
<b>Total Credit Hours</b>		<b>30</b>

1

With approval from the advisor, students may request to waive any one core course and replace it with an alternate course that aligns with the goals of the degree program.

2

With approval from the advisor, students may take a graduate-level Journalism course other than JRN 5710.

3

Electives are selected in one of two areas of concentration, as delineated below. Students are required to take two STEM courses in the concentration of their choice and may take up to two non-STEM courses that align with their interests. The coursework allows students to choose from a wide range of topics within Marketing/Regulatory Writing or Popular Scientific Writing in alignment with their professional interests. The breadth of electives ensures that students are presented with the diverse scientific writing genres in science. Listed electives for each concentration serve as a guide. Thus, students are not restricted to the listed electives and may, in consultation with the program advisor, take other graduate-level courses as electives.

## Marketing/Regulatory Writing Concentration

Code	Title	Credit Hours
Select four from the following: <sup>1</sup> 12		
QARA 5502	Regulation of Medical Devices: Submissions	
QARA 5533	Requirements for Product Labeling and Advertising	
QARA 5534	Regulatory Aspects of Biomedical/Technical Communication	
QARA 5545	Post Approval Changes (PAC)	
QARA 5548	Risk Management of Pharmaceutical and Medical Devices	
QARA 5592	Food and Drug Law	
QARA 5594	Regulation of Dietary Supplements and Functional Foods	
QARA 5596	Food Labeling and Regulatory Affairs	
QARA 5611	Regulation of Advertising and Promotions	
<b>Total Credit Hours</b>		<b>12</b>

1

Students in the Marketing/Regulatory Writing concentration must take two QARA courses, but may elect to replace two courses with any two graduate-level courses offered at Temple that align with the Marketing/Regulatory Writing concentration.

## Popular Scientific Writing Concentration

Code	Title	Credit Hours
Select four from the following: <sup>1</sup> 12		
BIOL 5111	Genomics in Medicine	
BIOL 5312	Biostatistics	
BIOL 82X0	Seminar in Genomics Analytics	
CHEM 8201	The Chemistry of Natural Products	
ENG 9400	Seminar in Rhetoric and Composition	
HPM 8008	Health Economics	

JRN 5005	Communication Law
JRN 5012	
JRN 5013	
JRN 5212	The Entrepreneurial Journalist
MSP 8741	Emergent Media Production
PHIL 5216	Philosophy of Science
PHIL 5249	Ethics in Medicine
STAT 5001	Quantitative Methods for Business
<b>Total Credit Hours</b>	<b>12</b>

1

Students in the Popular Scientific Writing concentration may take any two STEM courses and any two non-STEM graduate-level courses offered at Temple that align with their interests. The list below serves as a guide for electives within the Popular Scientific Writing concentration.

## Approved Electives for the Popular Scientific Writing Concentration <sup>1</sup>

Code	Title	Credit Hours
ENG 8706	Advanced Study in Rhetoric and Composition	3
EPBI 5101	Fundamentals of Epidemiology	3
HPM 8013	Research Methods in Health Policy	3
HRPR 8101	Bioethics and Ethical Decision-Making	3
MKTG 5001	Marketing Management/Strategy	3

1

With approval from the advisor, students may take one of these approved electives or any other graduate-level course as an elective to replace one course for the Popular Scientific Writing concentration.

### Culminating Event:

#### Capstone Project:

BIOL 9995 Capstone Project constitutes a culminating event of the Scientific Writing PSM and requires the submission of a detailed technical paper and oral presentation. In the summer following the first year of study, students are expected to complete an internship, which becomes part of their capstone project. The internship must take place in a workplace approved by the PSM Steering Committee, which includes faculty from the College of Science and Technology, Lew Klein College of Media and Communication, and the Provost's Office. Workplaces may include a patent law office specializing in chemical, engineering and scientific innovation; a practicing scientist; a publishing company; or any other relevant workplace on or off Temple's campus.

## Contacts

### Program Web Address:

<https://www.temple.edu/academics/degree-programs/scientific-writing-psm-st-scwr-psm>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-5588

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### Program Coordinators:

Jackie Sackie

[jackie.sackie@temple.edu](mailto:jackie.sackie@temple.edu)

Ramin Shafagh

[ramin.shafagh@temple.edu](mailto:ramin.shafagh@temple.edu)

### Program Director:

Darryl L'Heureux, PhD

[dlheure@temple.edu](mailto:dlheure@temple.edu)

215-204-4883

## Graduate Certificate: Bioinformatics

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Bioinformatics.

### About the Certificate

Bioinformatics is the science that happens when computers are joined with the latest discoveries in biochemistry, biophysics and genomics. It is a rapidly growing field that brings together elements of biology, chemistry, computer science, physics and statistics. Bioinformatics is an area of rapid job growth and has become an essential part of healthcare research and the biotechnology and pharmaceutical industries. Bioinformatics specialists are employed to process and analyze the high volume of genomic and proteomic data generated from large-scale sequencing and related efforts that form the foundation of personalized medicine.

With only 12 credits of core coursework required, the Bioinformatics graduate certificate program provides a mechanism to obtain a certificate in the field in one or two academic terms. The classes are taught by the same faculty as those for the Bioinformatics and Biological Data Science PSM program. Certificate students take the same core courses as PSM students but without committing to a capstone project or the full 30 credits needed to earn a graduate degree. The Bioinformatics graduate certificate program credentials students in the field through a curriculum chosen according to the student's interest or gap in knowledge.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the PSM program coordinator for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within four to six weeks of receipt of all supporting application documents. Late applications may be considered for admission.

International students should note that the certificate does not fulfill the F-1 visa requirement for full-time coursework. International students already enrolled in a PSM or other graduate program at Temple may enroll in the certificate program, in addition to their current program, with approval from their program's graduate advisor.

*APPLY ONLINE to this certificate program.*

**Coursework Required for Admission Consideration:** Applicants should have a strong background in one or more science, technology, engineering or mathematics (STEM) fields.

**Bachelor's Degree in Discipline/Related Discipline:** The Bioinformatics graduate certificate has been designed for recent graduates and professionals who have a bachelor's degree or equivalent in a STEM field.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in the Bioinformatics certificate, career goals, and academic and professional achievements.

**Interview:** An in-person or Skype interview is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Bioinformatics graduate certificate program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The PSM in Bioinformatics Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
Select four from the following:		
BIOL 5312	Biostatistics	12
BIOL 5403	Genomics	
BIOL 5411	Structural Bioinformatics I	
BIOL 5509	Computational Genomics	
BIOL 5514	Biological Models in Python	
CHEM 5412	Structural Bioinformatics II	

**Total Credit Hours** 12

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/bioinformatics-certificate-graduate-st-binf-grad>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-8854

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*PSM Program Coordinators:*  
Jackie Sackie  
jackie.sackie@temple.edu

Ramin Shafagh  
ramin.shafagh@temple.edu

*Program Director:*  
David Liberles, PhD  
daliberles@temple.edu

## Graduate Certificate: Bioinnovation

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Bioinnovation.

### About the Certificate

The primary objective of the Bioinnovation graduate certificate program is to develop a portfolio of knowledge and experience that allows individuals with a background in science, business, communication, law, and policy and regulation to pursue careers in such fast-growing fields as bioinformation, the environment, global health, pharmaceuticals and biotechnology, technology transfer and trade. The certificate program provides:

- extensive biotechnology and biomedical background to challenge and complement traditional thinking and applications;
- review of the translational nature of biodiscoveries through classroom instruction and direct interaction with different bioindustry professionals, including scientists, lawyers, journalists and others; and
- development of team and matrix work routines and effective communication skills.

The Bioinnovation certificate program is designed to help recent graduates obtain relevant employment or to accelerate career advancement and/or allow a career shift for currently employed professionals. The certificate is a shorter, transcripted program taken from the core requirements of the Bioinnovation PSM program. Certificate

students take the same core courses as PSM students but without committing to a capstone project or the full 30 credits needed to earn a graduate degree. The classes are taught by the same faculty as those for the Bioinnovation PSM program.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the assistant director for PSM programs for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:* March 1

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within four to six weeks of receipt of all supporting application documents. Late applications may be considered for admission.

International students should note that the certificate does not fulfill the F-1 visa requirement for full-time coursework. International students already enrolled in a PSM or other graduate program at Temple may enroll in the certificate program, in addition to their current program, with approval from their program's graduate advisor.

*APPLY ONLINE to this certificate program.*

**Coursework Required for Admission Consideration:** Applicants should have a strong background in one or more of the following fields: science, business, communication, law, or policy and regulation. Upon review, the PSM in Bioinnovation Steering Committee may allow departures from course requirements.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in Biology, Chemistry, Business or Communication, or a Juris Doctor in Law (or foreign equivalent), is required. Non-STEM graduates are required to enroll in at least two Biology foundation courses, as recommended by the PSM in Bioinnovation Steering Committee, on a non-matriculated basis.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in the Bioinnovation certificate, career goals, and academic and professional achievements.

**Interview:** An in-person or Skype interview is required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Bioinnovation graduate certificate program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The PSM in Bioinnovation Steering Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

## Certificate Requirements

Number of Credits Required to Complete the Certificate: 12

Required Courses:

Code	Title	Credit Hours
Select four courses from the following:		
BIOL 5226	Innovative Biomodels and Concepts	12
BIOL 5227	Biomarkers and Biotargets: Research and Commercialization	
BIOL 5228	Epigenetics, Genetics: Applications in Drug Design and Drug Response	
BIOL 5229	Systems Biology: Principles and Applications	
BIOL 5239	Dissemination of Biodiscoveries and Virtual Reality in Medicine	
BIOL 5505	Ethics Regulation and Policy in Biotechnology	
SGM 5136	Principles of Strategy and Management	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/bioinnovation-certificate-graduate-st-bioi-grad>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-0306

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Program Coordinators:*

Jackie Sackie  
jackie.sackie@temple.edu

Ramin Shafagh  
ramin.shafagh@temple.edu

*Program Co-Directors:*

Antonio Giordano  
giordano@temple.edu  
215-204-9521

Gianfranco Bellipanni  
bellipa4@temple.edu  
215-204-9578

## Graduate Certificate: Biotechnology

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Biotechnology.

### About the Certificate

Biotechnology is, at its simplest, technology based on biology. It harnesses cellular and biomolecular processes to develop technologies and products that help improve our lives and the health of our planet. Modern biotechnology provides breakthrough products and technologies to combat debilitating and rare diseases; reduce our environmental footprint; feed the hungry; use less and cleaner energy; and have safer, cleaner and more efficient industrial manufacturing processes. Recent advances in biotechnology are helping us prepare for and meet society's most pressing challenges.

With only 12 credits of core coursework required, the Biotechnology graduate certificate program provides a mechanism to obtain a certificate in the field in one or two academic terms. The classes are taught by the same faculty as those for the Biotechnology PSM program. Certificate students take the same core courses as PSM students but without committing to a capstone project or the full 30 credits needed to earn a graduate degree. The Biotechnology graduate certificate program credentials future leaders in the field through a curriculum chosen according to the student's interest.

**Time Limit for Certificate Completion:** 2 years

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the assistant program director for more information.

**Non-Matriculated Student Policy:** Non-matriculated students may take up to 9 credits of coursework before applying to the graduate certificate program.

### Admission Requirements and Deadlines

**Application Deadline:**

*Fall:* March 1

Applications are processed on a continual basis. Ordinarily, the applicant is informed of an admissions decision within four to six weeks of receipt of all supporting application documents. Late applications may be considered for admission.

International students should note that the certificate does not fulfill the F-1 visa requirement for full-time coursework. International students already enrolled in a PSM or other graduate program at Temple may enroll in the certificate program, in addition to their current program, with approval from their program's graduate advisor.

*APPLY ONLINE to this graduate program.*

**Coursework Required for Admission Consideration:** Applicants should have a strong background in Biology, Chemistry, Engineering or



Physics. Upon review, the Biology Department's Graduate Committee may allow departures from course requirements.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree in a science or engineering field is required.

**Statement of Goals:** In approximately 500 to 1,000 words, describe your interest in the Biotechnology certificate, research goals, and academic and professional achievements.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
Select four or five courses, as appropriate, from the following: <sup>1</sup> 12		
BIOL 5479	Biotechnology	
BIOL 5501	Analytical Biotechnology	
BIOL 5502	Microbial Biotechnology	
BIOL 5503	Biotechnology Laboratory I	
BIOL 5504	Biotechnology Laboratory II	
BIOL 5505	Ethics Regulation and Policy in Biotechnology	
BIOL 5521	Nucleic Acid Technologies	
<b>Total Credit Hours</b>		<b>12</b>

1

Four courses are required if all courses are taken for 3 credits. These include BIOL 5479, BIOL 5502, BIOL 5503, BIOL 5504, and BIOL 5505. Five courses are taken if BIOL 5501 Analytical Biotechnology (1.5 s.h.) and BIOL 5521 Nucleic Acid Technologies (1.5 s.h.) are selected.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/biotechnology-certificate-graduate-st-biot-grad>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-8842

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Program Coordinator:*  
Ramin Shafagh  
ramin.shafagh@temple.edu

*Program Director:*  
Shohreh Amini, PhD

ashohreh@temple.edu  
215-204-0604

## Graduate Certificate: Computer Science

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Computer Science.

### About the Certificate

The graduate certificate in Computer Science is designed to meet the professional needs of individuals in the workforce who require advanced training and advanced competencies in computer science. Students who complete the certificate program have the option of enrolling in the Computer Science MS (p. 908) program and having their coursework in which they earned a grade of "B" or higher count toward the master's degree.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The certificate program can be completed on a full- or part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the graduate administrative coordinator for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Computer Science by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

### Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
CIS 5511	Programming Techniques	3
Three additional courses at or above CIS 5500		9
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/computer-science-certificate-graduate-st-csci-grad>

## Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
cisadmit@temple.edu  
215-204-8450

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### Admissions:

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

### Graduate Advisor:

Xiuqi "Cindy" Li, PhD  
xli@temple.edu  
215-204-2940

### Graduate Chairperson:

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

### Department Chairperson:

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

## Graduate Certificate: Computer Science Instruction

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Computer Science Instruction.

## About the Certificate

The graduate certificate in Computer Science Instruction is intended to provide a pathway for in-service mathematics and science teachers to quickly develop the necessary skill set to teach computer science at the secondary level. This certificate consists of four courses that can be completed in four continuous academic terms. The content covered in the courses aligns with the Program Design and Development and the Programming Language sections of the *Praxis*® Computer Science (5652) Subject Test.

Upon successful completion of the certificate, students are able to demonstrate knowledge of the foundational ideas of computer science as part of a creative and/or problem-solving process. In addition, teachers are equipped with knowledge of pedagogical strategies for broadening participation of underrepresented groups in computer science and have developed a portfolio of instructional materials that can be used to teach computer science concepts in secondary education classrooms. Teachers who are already certified to teach in secondary education are prepared to take the *Praxis*® Computer Science (5652) Subject Test

required by the Pennsylvania Department of Education for certification to teach Computer Science in Pennsylvania public schools.

No course in the certificate program can be taken for credit toward any graduate program offered by the Department of Computer and Information Sciences.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the graduate administrative coordinator for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Computer Science Instruction by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University. The certificate program is not open, however, to applicants who have completed a bachelor's degree in computer science, information science and technology, or related majors.

**Other Requirement:** Applicants must be certified by the Commonwealth of Pennsylvania in secondary education or must obtain the permission of the program director to enroll.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
CIS 5701	Introduction to Teaching Computer Science Principles	3
CIS 5702	Teaching Advanced Computer Science Principles	3
CIS 5703	Teaching Networked Computing Systems	3
CIS 5704	Teaching the Use of Data, Algorithms, and Creativity for Problem Solving	3
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/computer-science-instruction-certificate-graduate-st-cosi-grad>

## Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801

cisadmit@temple.edu  
215-204-8450

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### Admissions:

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

### Graduate Advisor:

Xiuqi "Cindy" Li, PhD  
xli@temple.edu  
215-204-2940

### Graduate Chairperson:

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

### Department Chairperson:

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

# Graduate Certificate: Cyber Defense and Information Assurance

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Cyber Defense and Information Assurance.

## About the Certificate

The graduate certificate program in Cyber Defense and Information Assurance (CyberDIA) is designed for aspiring technical professionals at all career levels—entry-level, mid-career and senior executives—who want to equip themselves with skills necessary to protect their organization and the nation from increasing cyber threats. The multidisciplinary program design borrows knowledge, skills and expertise from different academic disciplines, including business, computer and information sciences, electrical and computer engineering, and law. The key focus is on a holistic cybersecurity framework, i.e., one that is built around the core principles of preventive, detective and corrective security mechanisms. While the CyberDIA curriculum is technology intensive, focusing on network security and digital forensics, it also bridges the ever-increasing gap between cybersecurity technology and cybersecurity policies. Students take 12 credits of the core curricular classes of the CyberDIA MS program to complete the certificate.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program.

Please contact the graduate administrative coordinator for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Cyber Defense and Information Assurance by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 12*

*Required Courses:*

Code	Title	Credit Hours
CIS 5017	Operating Systems and Architecture <sup>1</sup>	3
or CIS 5512	Operating Systems	
CIS 5107	Computer Systems Security and Privacy	3
CIS 5405	Introduction to Digital Forensics <sup>2</sup>	3
CIS 5415	Ethical Hacking and Intrusion Forensics <sup>2</sup>	3
<b>Total Credit Hours</b>		<b>12</b>

1

With advisor recommendation and approval, students take CIS 5017 or CIS 5512.

2

With advisor approval, students who have taken "Introduction to Digital Forensics" and/or "Ethical Hacking and Intrusion Forensics" at the undergraduate level may take an alternate approved course(s) at the master's level.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/cyber-defense-and-information-assurance-certificate-graduate-st-cdia-grad>

### Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
cst.psm@temple.edu  
215-204-8450

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### Admissions:

Graduate Administrative Coordinator  
cisadmit@temple.edu  
215-204-8450

### Program Director:

Mary Grace Giraldo, PhD  
mary.grace.giraldo@temple.edu  
215-204-8450

### Graduate Chairperson:

Yu Wang, PhD  
wangyu@temple.edu  
215-204-4187

### Department Chairperson:

Jamie Payton, DSc  
jamie.payton@temple.edu  
215-204-8245

# Graduate Certificate: Forensic Chemistry

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Forensic Chemistry.

## About the Certificate

The graduate certificate in Forensic Chemistry provides advanced academic credentials for the working professional seeking training beyond the baccalaureate degree. The certificate program is designed to introduce students to a portfolio of knowledge and experience that enables them to tackle problems in forensic, environmental and other areas of chemistry. Other objectives include providing:

- a theoretical understanding of major concepts in forensic chemistry;
- a range of practical skills in forensic chemistry; and
- knowledge and skills applicable to academia, industry and government.

The certificate program in Forensic Chemistry includes core requirements in current topics in data analysis; forensic chemistry; and law, ethics and policy. Annual symposia are held wherein leaders in the field of forensic science present on current topics and developments in the field of forensics and forensic chemistry. Courses may be conducted as hands-on training in a modular forensic chemistry laboratory.

**Campus Location:** Main, Ambler

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the program director for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Forensic Chemistry by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for

Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 13

*Required Courses:*

Code	Title	Credit Hours
CHEM 5108	Investigative Chemistry	4
CHEM 8001	Leadership, Law and Ethics in Forensic Science	3
Select two from the following: <sup>1</sup>		6
CHEM 8007	Biotransformation of Drugs and Xenobiotics	
CHEM 8107	Advanced Forensic Chemistry	
CHEM 8111	Forensic Toxicology	
CHEM 8310	Special Topics in Analytical Chemistry	
CHEM 8601	Analytical Separations	
<b>Total Credit Hours</b>		<b>13</b>

<sup>1</sup>

With advisor approval, students may substitute an alternate graduate-level course for one of the five courses listed.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/forensic-chemistry-certificate-graduate-st-fchm-grad>

### Department Information:

Dept. of Chemistry  
130 Beury Hall  
1901 N. 13th Street  
Philadelphia, PA 19122-6078  
cst.psm@temple.edu  
215-204-2552

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

### Program Director:

Khaled M. Elokely, PhD  
kelokely@temple.edu

## Graduate Certificate: High-Performance Computing for Scientific Applications

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in High-Performance Computing for Scientific Applications.

### About the Certificate

The graduate certificate in High-Performance Computing for Scientific Applications is designed to serve working professionals who need academic credentials for career advancement. Students are introduced to a portfolio of knowledge and experience that enables them to tackle problems using high-performance computing by:

- obtaining a fundamental understanding of the mathematical foundations and structure of numerical methods and parallel computing;
- becoming proficient in using hardware, algorithms and programming;
- effectively applying high-performance computing to a variety of real-world problems, across multiple application fields; and
- gaining knowledge and skills applicable to academia, industry and government.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the graduate chairperson for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in High-Performance Computing for Scientific Applications by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

### Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 13-14<sup>1</sup>

*Required Courses:*

Code	Title	Credit Hours
MATH 5061	Fundamentals of Computer Programming for Scientists and Engineers	4
MATH 5062	High Performance Computer Programming for Scientific Modeling	3
MATH 5063	Introduction to High-Performance Computing Technology for Scientists	4

MATH 5066	Mathematical Methods for High Performance Computing	3
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**Total Credit Hours** 14

1

Students may replace any *one* course on the list with a graduate-level course approved by the advisor. If a 3-credit graduate course is substituted for a 4-credit core course, then the certificate may be completed in 13 credits.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/high-performance-computing-for-scientific-applications-certificate-graduate-st-hpc-grad>

#### Department Information:

Dept. of Mathematics  
638 Wachman Hall  
1805 N. Broad Street  
Philadelphia, PA 19122-6094  
cst.psm@temple.edu  
215-204-7842

#### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

#### Department Contacts:

*Graduate Chairperson:*  
David Futer, PhD  
dfuter@temple.edu  
215-204-7854

*Department Chairperson:*  
Brian Rider, PhD  
brian.rider@temple.edu  
215-204-7589

## Graduate Certificate: Information Science and Technology

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Information Science and Technology.

### About the Certificate

The graduate certificate in Information Science and Technology is designed to meet the professional needs of individuals in the workforce who require advanced training and advanced competencies in computer science. Students who complete the certificate program have the option of enrolling in the Information Science and Technology MS (p. 920) program and having their coursework in which they earned a grade of "B" or higher count toward the master's degree.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the graduate administrative coordinator for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Information Science and Technology by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
Select four from the following:		12
CIS 5002	Database Design & Programming	
CIS 5016	Data Structures and Objects	
CIS 5017	Operating Systems and Architecture	
CIS 5107	Computer Systems Security and Privacy	
CIS 5208	Knowledge Management	
CIS 5210	Seminar in Information Science and Technology	
CIS 5274	Software Quality Assurance and Testing	
CIS 5275	Software Project Management	
CIS 5301	Advanced Database Management Systems	
CIS 5303	Usability Engineering	
CIS 5304	Network Technologies	
CIS 5306	Software Engineering	
CIS 5410	Advanced Seminar in Information Science and Technology	
CIS 5590	Topics in Computer Science	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/information-science-and-technology-certificate-graduate-st-ist-grad>

### Department Information:

Dept. of Computer and Information Sciences  
313 Science and Education Research Center  
1925 N. 12th Street  
Philadelphia, PA 19122-1801  
[cst.psm@temple.edu](mailto:cst.psm@temple.edu)

215-204-8450

## Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

## Department Contacts:

*Admissions:*

Graduate Administrative Coordinator  
[cisadmit@temple.edu](mailto:cisadmit@temple.edu)  
215-204-8450

*Graduate Advisor:*

Dominique M. Kliger, PhD  
[dkliger@temple.edu](mailto:dkliger@temple.edu)  
215-204-3072

*Graduate Chairperson:*

Yu Wang, PhD  
[wangyu@temple.edu](mailto:wangyu@temple.edu)  
215-204-4187

*Department Chairperson:*

Jamie Payton, DSc  
[jamie.payton@temple.edu](mailto:jamie.payton@temple.edu)  
215-204-8245

## Graduate Certificate: Mathematics for Teaching

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Mathematics for Teaching.

## About the Certificate

Mathematics forms the base for all areas of science. However, there is a shortage of qualified mathematics teachers in Pennsylvania and nationwide. The U.S. Department of Education Office of Postsecondary Education documents a shortage of both middle- and secondary-level mathematics teachers in Pennsylvania. See <https://www2.ed.gov/about/offices/list/ope/pol/bteachershortageareasreport201718.pdf>.

The Mathematics Department offers a graduate certificate in mathematics education for teachers to help those with undergraduate degrees in related fields develop their mathematical knowledge and expertise in order to better equip them to teach in a middle or secondary mathematics or science classroom. The content covered in the 12-credit program aligns with the Standards for Mathematical Practice set forth in the Common Core State Standards Initiative. At the completion of the program, students have a better understanding of the theory beneath the topics they will teach their future students.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the graduate chairperson for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Mathematics

for Teaching by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12

*Required Courses:*

Code	Title	Credit Hours
Select four from the following:		12
MATH 5011	Algebra and Functions for Teaching	
MATH 5012	Introduction to Mathematical Modeling for Teaching	
MATH 5013	Geometry for Teaching	
MATH 5014	Probability Theory and Applications for Teaching	
MATH 5017	Number Theory and Proof for Teaching	
<b>Total Credit Hours</b>		<b>12</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/mathematics-for-teaching-certificate-graduate-st-mftc-grad>

### Department Information:

Dept. of Mathematics  
638 Wachman Hall  
1805 N. Broad Street  
Philadelphia, PA 19122-6094  
grad.math@temple.edu  
215-204-7842

### Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

*Graduate Chairperson:*  
David Futer, PhD  
dfuter@temple.edu  
215-204-7854

*Department Chairperson:*  
Brian Rider, PhD  
brian.rider@temple.edu  
215-204-7589

# Graduate Certificate: Scientific Writing

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the graduate certificate in Scientific Writing.

## About the Certificate

In science, the ability to write clearly and succinctly is a skill in demand by organizations as diverse as nonprofit organizations, pharmaceutical companies and news outlets. The graduate certificate in Scientific Writing enables students with diverse backgrounds in science, technology, engineering and mathematics (STEM) currently employed in those areas to enhance and broaden their skills for their professional advancement. The certificate is a collaborative effort of the College of Science and Technology and the Lew Klein College of Media and Communication.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. Please contact the program director for more information.

**Non-Matriculated Student Policy:** Students can take up to 9 credits on a non-matriculated basis. When they complete 9 credits, they must declare their intention to complete the graduate certificate in Scientific Writing by completing and submitting the "Non-Degree Seeking Student Request to Exceed 9 Credits of Graduate Coursework for Certificate Program," found in TUportal under the Tools tab within "University Forms."

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 12 or 13

*Required Courses:*

Code	Title	Credit Hours
Select four from the following:		12-13
BIOL 5505	Ethics Regulation and Policy in Biotechnology <sup>1</sup>	
BIOL 5522	Introduction to Scientific and Regulatory Writing <sup>1</sup>	
BIOL 5532	Introduction to Grant Writing <sup>1</sup>	
BIOL 5533	Communicating Science to a Broader Audience / Non-Scientists <sup>1</sup>	
JRN 5710	Seminars in Communication <sup>1,2</sup>	
<b>Total Credit Hours</b>		<b>12-13</b>

1

With approval from the advisor, students may request to waive any one core course and replace it with an alternate course that aligns with the goals of the certificate.

2

With approval from the advisor, students may take a graduate-level Journalism course other than JRN 5710.

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/scientific-writing-certificate-graduate-st-scwr-grad>

### Department Information:

Dept. of Biology  
255 Biology-Life Sciences Building  
1900 N. 12th Street  
Philadelphia, PA 19122-6078  
[cst.psm@temple.edu](mailto:cst.psm@temple.edu)  
215-204-5588

### Submission Address for Application

#### Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

### Department Contacts:

#### *Program Coordinators:*

Jackie Sackie  
[jackie.sackie@temple.edu](mailto:jackie.sackie@temple.edu)

Ramin Shafagh  
[ramin.shafagh@temple.edu](mailto:ramin.shafagh@temple.edu)

#### *Program Director:*

Darryl L'Heureux, PhD  
[dlheure@temple.edu](mailto:dlheure@temple.edu)  
215-204-4883



## School of Sport, Tourism and Hospitality Management

Our industries are rooted in deep professional networks, first-class service and access to opportunities. So are we, the School of Sport, Tourism and Hospitality Management (STHM) at Temple University. STHM is the largest provider of tourism, hospitality, sport and recreation management education in the Philadelphia region and an international model for innovative teaching and research. Through classroom instruction, experiential learning and executive education, we prepare talented professionals and scholars for rewarding careers.

Temple University began its long and distinguished record of professional preparation in the fields of recreation, sport, tourism and hospitality in 1908, when courses were offered in playground supervision through its Physical Education program. By the 1950s, Temple was offering programs in recreation education at both the undergraduate and graduate levels. In 1973, a curriculum in Recreation and Leisure Studies was established. The bachelor's degree in Sport and Recreation Management was first accredited in 1978 by the Council on Accreditation of Parks, Recreation, Tourism and Related Professions (COAPRT). As a result, Temple University was one of the first to have its programs accredited through the National Recreation and Park Association (NRPA).

STHM is ideally located in Philadelphia, one of the nation's largest cities and a living laboratory for the sport, recreation, tourism and hospitality industries. As a premier destination for visitors from around the world, Philadelphia is home to 14,000 Center City hotel rooms; more than 6,000 restaurants; a thriving and growing casino and gaming scene; the Pennsylvania Convention Center; and countless attractions such as Independence Hall, the Liberty Bell, the National Constitution Center, the Philadelphia Museum of Art, and the Philadelphia Zoo. The city provides innumerable opportunities for applied learning with access to all five major sports through the Eagles, Flyers, Phillies, Sixers, and Union, as well as a host of major national and international sporting events such as the Army-Navy game, March Madness basketball, U.S. Olympic trials, and the X-Games. Philadelphia also has one of the country's most active parks and recreation departments and the world's largest urban park in Fairmount Park.

The mission of STHM is to:

- enrich the tourism, hospitality, recreation and sport industries by fostering diversity and inclusion;
- meet the leadership needs of the tourism, hospitality, recreation and sport industries by providing quality, student-centered, professional preparation programs;
- advance knowledge in tourism, hospitality, recreation and sport by conducting high-level research;
- enhance the tourism, hospitality, recreation and sport management professions by offering quality service to relevant organizations; and
- educate the Temple University community about the significance of tourism, hospitality, recreation and sport in today's multicultural society by offering courses in general education, collaborating with other faculty on joint research projects, and serving on relevant committees.

## Graduate Programs and Certificates

- Hospitality Management MS (p. 945)
- Sport Business MS (p. 945)

- Sport Business Executive Program MS (p. 947)
- Travel and Tourism MS (p. 947)
- Graduate Certificate: Destination Management (p. 947)
- Graduate Certificate: Event Management (p. 948)
- Graduate Certificate: Global Tourism (p. 948)
- Graduate Certificate: Service Excellence (p. 949)
- Graduate Certificate: Tourism Analytics (p. 950)

## Graduate Faculty

*Bradley J. Baker*, Assistant Professor, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, Temple University.

*Daniel C. Funk*, Professor, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, The Ohio State University.

*Gareth J. Jones*, Assistant Professor, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, North Carolina State University.

*Jeremy S. Jordan*, Professor, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, The Ohio State University.

*R. Aubrey Kent*, Professor, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, The Ohio State University.

*Thilo Kunkel*, Associate Professor, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, Griffith University.

*Lindsey Lee*, Assistant Professor, Department of Tourism and Hospitality Management, School of Sport, Tourism and Hospitality Management; PhD, University of Houston.

*Xiang Li*, Professor, Department of Tourism and Hospitality Management, School of Sport, Tourism and Hospitality Management; PhD, Texas A and M University.

*Lu Lu*, Associate Professor, Department of Tourism and Hospitality Management, School of Sport, Tourism and Hospitality Management; PhD, University of Washington.

*Joseph Mahan III*, Associate Professor of Instruction, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, University of Maryland College Park.

*Chihyung Michael Ok*, Associate Professor, Department of Tourism and Hospitality Management, School of Sport, Tourism and Hospitality Management; PhD, Kansas State University.

*Wesley S. Roehl*, Professor, Department of Tourism and Hospitality Management, School of Sport, Tourism and Hospitality Management; PhD, Texas A and M University.

*Elizabeth Taylor*, Assistant Professor, Department of Sport and Recreation Management, School of Sport, Tourism and Hospitality Management; PhD, University of Tennessee.

*Luorong Wu*, Associate Professor, Department of Tourism and Hospitality Management, School of Sport, Tourism and Hospitality Management; PhD, The Pennsylvania State University.

*Yang Yang*, Associate Professor, Department of Tourism and Hospitality Management, School of Sport, Tourism and Hospitality Management; PhD, University of Florida.

## Hospitality Management MS

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Sport Business MS

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

Learn more about the Master of Science in Sport Business.

### About the Program

The goal of the Master of Science in Sport Business program is to prepare future leaders in the areas of policymaking, management, supervision, education and research. The program provides for the analysis of current trends, problems and policies that affect sport and leisure services. Designed to provide a multifaceted approach to the study of sport business, the program is structured to prepare students for a wide range of career opportunities in athletic administration, marketing and promotions, recreation and event management, and sport analytics.

Students interested in studying at the doctoral level should refer to the PhD program in Business Administration with a concentration in Tourism and Sport offered by Fox School of Business and Management.

**Time Limit for Degree Completion:** 4 years

**Campus Location:** Main and Online

**Full-Time/Part-Time Status:** The degree program can be completed on a full- or part-time basis.

**Study Abroad:** Students who wish to do their internships abroad work closely with the Center for Student Professional Development, which assists with the necessary contacts and supervision.

**Areas of Specialization:** Four areas of concentration are offered:

- Athletics Administration
- Recreation and Event Management
- Sport Analytics
- Sport Marketing and Promotions

**Job Prospects:** Students typically find placement in campus recreation, college athletics, parks and recreation, professional sports, sport governing bodies, stadium and arena management, and youth sport.

**Financing Opportunities:** Students are automatically considered for merit scholarships from the School of Sport, Tourism and Hospitality Management (STHM) at the time of admission. Scholarships are awarded on the basis of a student's academic history and professional experience.

Teaching and Research Assistantships within STHM are reserved for students who are capable of teaching undergraduate classes in specialized academic areas or assisting in faculty research. Graduate Externships are also available in a variety of areas around the university. Only admitted students may be awarded assistantships and externships.

Teaching Assistants (TAs), Research Assistants (RAs), and Graduate Externs (GEs) are expected to provide between 5 and 20 hours per week of service throughout the academic year. A nine-month stipend and partial or full (up to 9 credits) tuition remission for the Fall and Spring terms are offered for TAs and RAs, depending on the number of hours worked. GEs receive a stipend only. Applications for assistantships and externships are not evaluated until a Graduate School application and all appropriate materials have been received. The evaluation of applicants for Teaching and Research Assistantships and Graduate Externships begins by March and continues until all positions have been filled.

## Admission Requirements and Deadlines

### Application Deadline:

*Fall:*

- December 15 – Early Admissions Deadline
- March 1 – Priority Scholarship Deadline and International Deadline
- June 30 – Final Application Deadline

Applications are processed as they arrive through the deadline. Late applications may be considered for admission if space is available.

APPLY ONLINE to this STHM graduate program.

### Letters of Reference:

*Number Required:* 2

*From Whom:* Letters of recommendation should be obtained from college/university faculty members familiar with academic competence and/or past or current work supervisors.

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

**Statement of Goals:** In 500 words or less, describe your short-term and long-term professional goals. Explain how this program will help you attain those goals.

### Standardized Test Scores:

GRE/GMAT: Required. Individuals may qualify for a GRE/GMAT waiver based on academic or professional history. Consult an admissions advisor with any questions.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- Duolingo: 110
- PTE Academic: 68

**Resume:** Current resume or CV required.

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the program. The credits must be equivalent to coursework offered in the Master of Science in Sport Business and cannot have been used to complete another degree either at Temple University or another institution. The grade must be a "B" (3.0 GPA) or better in order to transfer. The maximum number of credits a student may transfer is 6.

## Program Requirements

### General Program Requirements:

*Number of Credits Required Beyond the Baccalaureate:* 36

*Required Courses:*

Code	Title	Credit Hours
<b>Core Courses</b>		
SRM 5201	Sport Finance	3
SRM 5202	Sport Economics	3
SRM 5212	Legal Issues in Sport and Recreation	3
SRM 5215	Sport Marketing	3
SRM 5216	Strategic Management in Sport and Recreation	3
SRM 5218	Equity, Inclusion, and Ethics in Sport Business	3
STHM 5111	Applied Research	3
Select courses from the following totaling 9-12 credits: <sup>1</sup>		9-12
Athletics Administration Concentration		
SRM 5217	Sport Facility Management	
SRM 5225	Sport Sponsorship and Sales	
SRM 5231	Compliance in Intercollegiate Athletics	
SRM 5232	Fundraising and Development	
SRM 5233	Governance and Policy in Intercollegiate Athletics	
SRM 5234	Student-Athlete Affairs in Intercollegiate Athletics	
Any SRM or STHM Elective <sup>2</sup>		
Recreation and Event Management Concentration		
SRM 5217	Sport Facility Management	
SRM 5232	Fundraising and Development	
SRM 5235	The Business of Recreation	
SRM 5241	Evaluation of Programs and Events	
SRM 5242	Business of Non-Profit Organizations	
SRM 5243	Event Management	
SRM 5252	Sport for Development	
Any SRM or STHM Elective <sup>2</sup>		
Sport Analytics Concentration		
SRM 5251	Introduction to Sport Analytics	
SRM 5253	Applied Sport Analytics	
SRM 5254	Advanced Sport Data Analysis and Visualization	
SRM 5256	Professional Portfolio in Sport Analytics	
Any SRM or STHM Elective <sup>2</sup>		
Sport Marketing and Promotions Concentration		
SRM 5225	Sport Sponsorship and Sales	
SRM 5226	Consumer Behavior in Sport and Recreation	
SRM 5227	Sport Media and Communication	
Any SRM or STHM Elective <sup>2</sup>		

### Capstone Course

Select courses from the following totaling 3-6 credits: <sup>3</sup>		6-3
SRM 5285	Graduate Internship in Sport and Recreation	
STHM 9995	Master's Project	
STHM 9996	Master's Thesis	

**Total Credit Hours** **36**

1

Students electing to earn an optional concentration must complete 12 credits in any combination from the concentration courses identified for that concentration. To have a concentration designated on their transcript, students must declare the concentration with the Manager of Graduate Student Services.

2

Any SRM or STHM course at the 5000 level or higher is considered an elective.

3

Students who choose to take 6 credits of capstone courses take 9 credits of electives. Students who take 3 credits of capstone courses are required to complete 12 credits of electives.

### Culminating Event:

#### Capstone Course:

Students select a capstone course to complete the MS in Sport Business. As best fits their individualized program, they choose from SRM 5285 Graduate Internship in Sport and Recreation, STHM 9995 Master's Project and STHM 9996 Master's Thesis:

- SRM 5285 utilizes a field placement with emphasis on acquisition and application of practical skills. The student completes a total of 180 contact hours in cooperation with an agency and under supervision of both the University internship coordinator and the agency-designated supervisor.
- STHM 9995 is an option for students who do not need to undertake an internship. Students currently working in the field who seek a master's degree to gain a promotion should not be required to find additional work outside their active employment to complete an internship. Instead, such students can complete a project related to their specific field of interest.
- STHM 9996 is also offered as an option for any student who may opt to write a thesis, for example, in anticipation of pursuit of a doctoral degree.

## Contacts

### Program Web Address:

<https://sthm.temple.edu/graduate-programs/master-of-science-in-sport-business/>

### Department Information:

School of Sport, Tourism and Hospitality Management  
111 Speakman Hall  
1810 N. 13th Street  
Philadelphia, PA 19122-6083  
sthm@temple.edu  
215-204-8701

## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

*Assistant Director of Graduate Enrollment:*

Jon Campione

[jonathan.campione@temple.edu](mailto:jonathan.campione@temple.edu)

215-204-3104

*Manager of Student Services:*

James Alton, MEd

[james.alton@temple.edu](mailto:james.alton@temple.edu)

215-204-7140

*Chairperson:*

Amy Giddings, PhD

[giddings@temple.edu](mailto:giddings@temple.edu)

215-204-3022

## Sport Business Executive Program MS

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Travel and Tourism MS

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

### About the Program

This program is not accepting applications for the 2023-2024 academic year.

## Graduate Certificate: Destination Management

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

Learn more about the graduate certificate in Destination Management.

### About the Certificate

The graduate certificate in Destination Management is designed for those who are looking to coordinate the powerful experiences afforded by a destination that individuals cannot get anywhere else.

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

Apply for this certificate program at <https://apply.temple.edu/FOX/Account/Create>.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate:* 9

*Required Courses:*

Code	Title	Credit Hours
Select three from the following:		
THM 5323	Sustainable Tourism Development	9
THM 5328	Tourism Economics and Policy	
THM 5342	Destination Management and Marketing	
THM 5344	Crisis, Risk and Disaster Management	
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/destination-management-certificate-graduate-th-dm-grad>

### Department Information:

School of Sport, Tourism and Hospitality Management

111 Speakman Hall

1810 N. 13th Street

Philadelphia, PA 19122-6083

[sthm@temple.edu](mailto:sthm@temple.edu)

215-204-8701

## Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

## Department Contacts:

*Assistant Director of Graduate Enrollment:*

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[jonathan.campione@temple.edu](mailto:jonathan.campione@temple.edu)

215-204-3104

*Manager of Student Services:*

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[james.alton@temple.edu](mailto:james.alton@temple.edu)

215-204-7140

*Academic Director:*

Ben Altschuler, PhD

[benjamin.altshuler@temple.edu](mailto:benjamin.altshuler@temple.edu)

215-204-8924

*Chairperson:*

Xiang Li, PhD  
robertli@temple.edu

## Graduate Certificate: Event Management

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

Learn more about the graduate certificate in Event Management.

### About the Certificate

As an integral component of many industries, the event industry is continually growing at an exponential rate. The courses in the Event Management certificate program impart knowledge and information that facilitate the effective organization and management of events within a wide array of event planning.

While pursuing or upon completion of the certificate program, students may apply to the Hospitality Management MS (p. 945) or Sport Business MS (p. 945) graduate program. Courses completed for the certificate program with a grade of "B" or higher count toward the master's degree program.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. For more information, contact the assistant director of graduate enrollment for the School of Sport, Tourism and Hospitality Management.

### Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

Apply to this certificate program at <https://apply.temple.edu/FOX/Account/Create>.

### Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Year 1		
Fall		Credit Hours
THM 5334	The Business of Event Management	1.5
THM 5604	Event Logistics and Risk Management	1.5
<b>Credit Hours</b>		<b>3</b>
Spring		
SRM 5243	Event Management	3
<b>Credit Hours</b>		<b>3</b>
Summer		
THM 5341	Destination Events - A Global Perspective	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

### Contacts

#### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/event-management-certificate-graduate-th-evma-grad>

#### Department Information:

School of Sport, Tourism and Hospitality Management  
111 Speakman Hall  
1810 N. 13th Street  
Philadelphia, PA 19122-6083  
sthm@temple.edu  
215-204-8701

#### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

#### Department Contacts:

*Assistant Director of Graduate Enrollment:*  
Jon Campione  
jonathan.campione@temple.edu  
215-204-3104

*Assistant Dean and Academic Advisor:*  
Heather Blackburn, EdD  
heather.blackburn@temple.edu

*Academic Director:*  
Michael F. Sheridan, MTHM  
michael.sheridan@temple.edu

*Chairperson:*  
Xiang Li, PhD  
robertli@temple.edu

## Graduate Certificate: Global Tourism

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

Learn more about the graduate certificate in Global Tourism.

### About the Certificate

The graduate certificate in Global Tourism is designed for those who want to turn a passion for travel into business or career opportunities by learning more about the ever-growing and diversified tourism industry.

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

### Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

Apply for this certificate program at <https://apply.temple.edu/FOX/Account/Create>.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Code	Title	Credit Hours
THM 5328	Tourism Economics and Policy	3
THM 5343	Cultural Intelligence	3
THM 5345	Understanding Tourism in the 21st Century	3
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/global-tourism-certificate-graduate-th-gbtr-grad>

### Department Information:

School of Sport, Tourism and Hospitality Management  
111 Speakman Hall  
1810 N. 13th Street  
Philadelphia, PA 19122-6083  
sthm@temple.edu  
215-204-8701

### Submission Address for Application Materials:

<https://apply.temple.edu/FOX/Account/Login>

### Department Contacts:

*Assistant Director of Graduate Enrollment:*

Jon Campione  
jonathan.campione@temple.edu  
215-204-3104

*Manager of Student Services:*

James Alton, MSED  
james.alton@temple.edu  
215-204-7140

*Academic Director:*

Ben Altschuler, PhD  
benjamin.altshuler@temple.edu  
215-204-8924

*Chairperson:*

Xiang Li, PhD  
robertli@temple.edu

## Graduate Certificate: Service Excellence

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

Learn more about the graduate certificate in Service Excellence.

## About the Certificate

Great service is not merely a customer benefit: it is a competitive differentiator in any industry. The courses in the Service Excellence graduate certificate program leverage today's leading customer service strategies to prepare the student to establish a culture of service excellence that raises the standard of service for an organization, business unit, division or team.

Through the Service Excellence graduate certificate program, students learn to assess the market needs for the service provided by their organization and develop the leadership competencies required to create a consistent culture of empowerment and continuous improvement that will inspire exceptional service every time, everywhere.

**Campus Location:** Main

**Full-Time/Part-Time Status:** The graduate certificate is completed on a part-time basis. NOTE: International students may not be eligible to apply for a student visa based on admission to the certificate program. For more information, contact the assistant director of graduate enrollment for the School of Sport, Tourism and Hospitality Management.

## Admission Requirements and Deadlines

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

Apply for this certificate program at <https://apply.temple.edu/FOX/Account/Create>.

## Certificate Requirements

*Number of Credits Required to Complete the Certificate: 9*

*Required Courses:*

Year 1		Credit Hours
Fall		
THM 5311	Service Management for the Tourism and Hospitality Industry	3
THM 5601	Service Industry Analytics	3
<b>Credit Hours</b>		<b>6</b>
Spring		
THM 5602	Service Experience Design	3
<b>Credit Hours</b>		<b>3</b>
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

## Contacts

### Certificate Program Web Address:

<https://www.temple.edu/academics/degree-programs/service-excellence-certificate-graduate-th-svex-grad>

### Department Information:

School of Sport, Tourism and Hospitality Management  
111 Speakman Hall

1810 N. 13th Street  
 Philadelphia, PA 19122-6083  
 sthm@temple.edu  
 215-204-8701

**Submission Address for Application Materials:**

<https://apply.temple.edu/FOX/Account/Login>

**Department Contacts:**

*Assistant Director of Graduate Enrollment:*

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 jonathan.campione@temple.edu  
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*Academic Director:*

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 benjamin.altshuler@temple.edu  
 215-204-8924

*Chairperson:*

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 robertli@temple.edu

**Graduate Certificate: Tourism Analytics**

SCHOOL OF SPORT, TOURISM AND HOSPITALITY MANAGEMENT

Learn more about the graduate certificate in Tourism Analytics.

**About the Certificate**

The graduate certificate in Tourism Analytics is designed for those who enjoy looking at the details and are driven by a desire to extrapolate the value of the tourism industry.

**Campus Location:** Online

**Full-Time/Part-Time Status:** The graduate certificate can be completed on a part-time basis.

**Admission Requirements and Deadlines**

**Bachelor's Degree in Discipline/Related Discipline:** All applicants must present credentials that are the equivalent of the appropriate baccalaureate degree at Temple University.

Apply for this certificate program at <https://apply.temple.edu/FOX/Account/Create>.

**Certificate Requirements**

*Number of Credits Required to Complete the Certificate:* 9

*Required Courses:*

Code	Title	Credit Hours
STAT 5001	Quantitative Methods for Business	3
THM 5321	Tourism Analytics	3
THM 5328	Tourism Economics and Policy	3
<b>Total Credit Hours</b>		<b>9</b>

**GPA Required to be Awarded the Certificate:** 3.0 minimum

**Contacts**

**Certificate Program Web Address:**

<https://www.temple.edu/academics/degree-programs/tourism-analytics-certificate-graduate-th-tral-grad>

**Department Information:**

School of Sport, Tourism and Hospitality Management  
 111 Speakman Hall  
 1810 N. 13th Street  
 Philadelphia, PA 19122-6083  
 sthm@temple.edu  
 215-204-8701

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 215-204-8924

*Chairperson:*

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 robertli@temple.edu

# Academic Programs

Temple University's Board of Trustees meets regularly to consider recommendations to establish, terminate or change academic programs. To see the full list of academic programs by school and college, including programs that have been terminated, please read Temple's Policy on Establishing, Restructuring and Terminating Academic Programs.

The following Academic Programs Chart lists Temple University's active degrees, majors, minors and certificates alphabetically, along with the school or college that grants each degree, major, minor and certificate.

Students should be aware that, while all programs cannot be completed on all campuses, courses in many programs are offered on multiple campuses. To learn what specific courses are offered on which campuses in a given semester, refer to the Class Schedule.

Major	A cohesive combination of courses including introductory, intermediate, and advanced coursework that designates a student's primary area of study. Academic programs may include required or optional concentrations. An undergraduate major is typically 36-76 credit hours of the total degree. Majors are designated on university transcripts when the degree is awarded.
Minor	A designated combination of courses in a discipline or area of study. Like the major, it is expected to have coherence and increasing sophistication. A minor is typically 18-24 credit hours (or approximately half of the major) and is outside of, but may complement, the discipline of a student's major. A school/college can determine if a minor is restricted to students in specific schools, colleges or majors and can include rules as to how certain courses can be used to meet requirements. Minors are designated on university transcripts when the degree is awarded.
Concentration	A coordinated grouping of courses, typically 18-24 credits in an undergraduate program of study and 6-12 credits in a graduate program, representing a sub-specialization or emphasis within a major field available for students majoring in that discipline. Concentrations may be offered at the undergraduate, graduate, or professional level and can be required or optional. Concentrations are designated on university transcripts when the degree is awarded.
Certificate	A designated combination of courses in an area of study, typically requiring 9-15 credits. A certificate is outside of, but may complement, the discipline of a student's major. It may also be offered to non-degree seeking students. Certificates can be established at the undergraduate, graduate or professional level. A school/college can determine if a certificate is restricted to students in specific schools, colleges or majors and can include rules as to how certain courses can be used to meet requirements. For matriculated undergraduates, a certificate is designated on university transcripts when the degree is awarded. For graduate students, a certificate may be conferred upon completion and prior to degree conferral. For nonmatriculated students, the certificate is designated on university transcripts and conferred upon completion.

## Academic Programs Chart: Degrees, Majors, Minors, Certificates

Asterisks (\*) and carets (^) denote multiple option areas (emphasis/concentration) within a program.

Degree Programs (emphasis)	Undergraduate	Graduate	Professional	School/College
Accomplished Teaching		MSEd (p. 187)		ED
Accountancy		MAcc (p. 87)		BU
Accounting	BBA, Minor			BU
Accounting (Data Analytics)	BBA			BU
Accounting and Financial Management		MS (p. 90)		BU
Acting	Cert.			CA
Actuarial Science	BBA	MS (p. 90)		BU
Adult and Organizational Development	BA, Minor			ED
Advanced Biotherapeutics: Manufacturing and Regulatory Affairs		MS (p. 730)		PH
Advanced Core Science Studies	Postbacc. Cert.			ST
Advanced Education in General Dentistry			Cert. (p. 168)	DN
Advanced Manufacturing and Robotics		Cert. (p. 324)		EN



Advanced Regulatory Affairs and Quality Assurance		Post-Master's Cert. (p. 769)	PH
Advertising (Account Management, International Communication*)	BA, Conc.*		CO
Advertising (Art Direction, International Communication*)	BA, Conc.*		CO
Advertising (Brand Strategy and Research, International Communication*)	BA, Conc.*		CO
Advertising (Copywriting, International Communication*)	BA, Conc.*		CO
Advertising (Media Planning, International Communication*)	BA, Conc.*		CO
Advocacy and Organizational Development		MEd (p. 189)	ED
Africology and African American Studies	BA, Minor	MA (p. 362), PhD (p. 364)	LA
American Legal Studies (TU Japan)		Cert. (p. 346)	LW
American Sign Language	Cert.		HP
American Studies	BA, Minor		LA
American and International Law		LLM (p. 329)	LW
American and International Law - China		LLM (p. 331)	LW
Ancient Mediterranean Studies	Minor		LA
Anthropology	BA, Minor	MA (not currently accepting applications) (p. 368), PhD (not currently accepting applications) (p. 368)	LA
Applied Behavior Analysis	Cert.	MSEd (p. 191), Cert. (p. 265)	ED
Applied Biostatistics		MPH (p. 789)	HP
Applied Epidemiology	Minor		HP
Applied Mathematics	BS		ST
Applied Physical Activity and Health Promotion		MS (not currently accepting applications) (p. 792)	HP
Applied Research and Evaluation		PSM (p. 192)	ED
Applied Sociology		PSM (not currently accepting applications) (p. 368)	LA
Arabic	Cert., Minor		LA
Architecture (Advanced Technologies and Design*, Health and Design*, Urban Ecologies and Design*)	BSArch	MArch (p. 39), MS* (p. 43)	TA
Art	BA (active in Japan), Minor		TA
Art Education	BSEd	MEd (p. 46)	TA
Art History	BA, Minor	MA (p. 48), PhD (p. 51)	TA
Art Therapy	BA		TA
Asian Business and Society	Cert.		LA
Asian Law		LLM (p. 333)	LW

Asian Studies	BA, Minor		LA
Astrophysics	Cert., Minor		ST
Athletic Training		MSAT (p. 792), DAT (p. 795)	HP
Audio and Live Entertainment	BA		CO
Autism Endorsement		Cert. (p. 267)	ED
Basic Core Science Studies	Postbacc. Cert.		ST
Basic Pharmaceutical Development		Cert. (p. 756)	PH
Biochemistry	BS		ST
Bioengineering		MSBioe (p. 286), PhD (p. 290)	EN
Bioengineering (Cellular Engineering)	BSBioe		EN
Bioengineering (Engineering Devices)	BSBioe		EN
Bioengineering (Pre-Health)	BSBioe		EN
Bioinformatics		PhD (p. 883), Cert. (p. 933)	ST
Bioinformatics and Biological Data Science (Bioinformatics, Biological Data Science)		PSM (p. 886)	ST
Bioinnovation		PSM (p. 888), Cert. (p. 934)	ST
Biologics and Biosimilars Manufacturing		Cert. (p. 756), Post-Master's Cert. (p. 771)	PH
Biologics and Biosimilars: Regulatory Aspects		Cert. (p. 758), Post-Master's Cert. (p. 772)	PH
Biology	BA, BS, Minor	MA (p. 891), MS (p. 893), PhD (p. 894)	ST
Biology with Teaching	BS		ST
Biology/Neuroscience		PhD	ST
Biomedical Anthropology	Minor		LA
Biomedical Sciences (Cancer Biology and Genetics*, General Biomedical Sciences^, Infectious Disease and Immunity*, Molecular and Cellular Biosciences*, Neuroscience*, Organ Systems and Translational Medicine*)		MS (thesis)* (p. 457), MS (non-thesis)^ (p. 457), PhD* (p. 460)	ME
Biopharmaceutical Manufacturing and Regulatory Affairs		Cert. (p. 759), Post-Master's Cert. (p. 773)	PH
Biophysics	BS		ST
Biotechnology		PSM (p. 897), Cert. (p. 935)	ST
Business	Minor		BU

Business Administration (Business Analytics [STEM]*, Finance [STEM]*, Health Sector Management*, Human Resource Management*, Information Systems and Digital Innovation*, Information Technology Management [STEM]*, Innovation Management and Entrepreneurship*, Marketing Management*, Sport Business*, Strategic Management*		MBA* (p. 92), Cert. (not currently open for enrollment) (p. 151)	BU
Business Administration Executive Program		MBA (p. 117), DBA (p. 119)	BU
Business Administration/ Accounting		PhD (p. 97)	BU
Business Administration/ Entrepreneurship		PhD (not currently accepting applications) (p. 98)	BU
Business Administration/ Finance		PhD (p. 99)	BU
Business Administration/ Human Resource Management and Organizational Behavior		PhD (p. 100)	BU
Business Administration/ Interdisciplinary Study		PhD (not currently accepting applications) (p. 102)	BU
Business Administration/ International Business Administration		PhD (p. 102)	BU
Business Administration/ Management Information Systems		PhD (p. 104)	BU
Business Administration/ Marketing		PhD (p. 106)	BU
Business Administration/ Operations and Supply Chain Management		PhD (p. 108)	BU
Business Administration/Risk Management and Insurance		PhD (p. 111)	BU
Business Administration/ Strategic Management		PhD (p. 113)	BU
Business Administration/ Tourism and Sport		PhD (p. 115)	BU
Business Analytics	Minor	MS* (p. 121), Cert. (p. 151)	BU
Business Basics	Cert.		BU
Business Economics		MA (applications to first be accepted for Fall 2025 admission) (p. 368)	LA
Business Law		Juris Doctor Cert. (p. 351)	LW
Business Management	BBA		BU
Business Plus	Cert.		BU
Business Research		MS (p. 123)	BU
Career and Technical Education	BSEd	MEd (p. 194), MSEd (p. 197)	ED

Career and Technical Education/Business, Computer and Information Technology Education	BSEd		ED
Career and Technical Education/K-12		Cert. (not currently open for enrollment)	ED
Career and Technical Education/Marketing Education	BSEd		ED
Ceramics (Art Education*)	BFA, Conc.*	MFA (p. 54)	TA
Ceramics with Entrepreneurial Studies	BFA		TA
Chamber Music	Cert.		BC
Chemistry	BA, BS, BS/MS (5 year), Minor	MS (p. 898), PhD (p. 900)	ST
Chemistry with Teaching	BS		ST
Children's Media	Cert.		CO
Chinese	BA, Cert., Minor		LA
Choral Conducting		MM (p. 475)	BC
City and Regional Planning (Sustainable Community Planning*, Transportation Planning*)	Minor	MS* (p. 56)	TA
Civil Engineering	BSCE	MSCE (p. 293), PhD (p. 297)	EN
Civil Engineering (Cooperative Education Program)	BSCE		EN
Civil Engineering (Environmental Engineering with Cooperative Education Program)	BSCE		EN
Civil Engineering (Environmental Engineering)	BSCE		EN
Classical Languages and Literature	Minor		LA
Classical Piano	Cert.		BC
Classical Voice	Cert.		BC
Classics (Classical Civilizations)	BA		LA
Classics (Classical Languages and Literature)	BA		LA
Clinical Health Services Research		Cert. (p. 870)	HP
Clinical Trial Management		Cert. (p. 760), Post-Master's Cert. (p. 774)	PH
Clinical and Health Psychology	Minor		LA
Cognitive Neuroscience	Minor		LA
Collaborative Piano and Chamber Music		MM (p. 478)	BC
Collaborative Piano and Opera Coaching		MM (p. 481)	BC
College Access and Success		Cert. (p. 268)	ED

Communication Management (Conflict Management and Dispute Resolution, Public Relations, Strategic Communication and Cross- Cultural Leadership)		MS (p. 440)	CO
Communication Sciences and Disorders		PhD (p. 797)	HP
Communication Studies	Minor		CO
Communication Studies (Communication Studies Thesis, International Communication*)	BA, Conc.*		CO
Communication Studies (Communication and Entrepreneurship, International Communication*)	BA, Conc.*		CO
Communication Studies (Contemporary Media Environments, International Communication*)	BA, Conc.*		CO
Communication Studies (Global Civil Society, International Communication*)	BA, Conc.*		CO
Communication Studies (Policy, Regulation and Advocacy, International Communication*)	BA, Conc.*		CO
Communication Studies (Production - active in Japan, International Communication*)	BA, Conc.*		CO
Communication and Activism	Minor		CO
Communication and Social Influence (International Communication*)	BA, Conc.*		CO
Communication for Development and Social Change		MS (p. 438)	CO
Community Arts Practices	Cert. (not currently open for enrollment)	Cert. (not currently open for enrollment) (p. 78)	TA
Community Development	BS, Minor		TA
Computational Data Science		MS (p. 903)	ST
Computer Science	BA, BS, Minor	MS (p. 908), Cert. (p. 936)	ST
Computer Science Instruction		Cert. (p. 937)	ST
Computer Science and Physics	BS		ST
Computer Security and Digital Forensics	Cert.		ST
Computer and Information Science (Artificial Intelligence and Applications, Computer and Network Systems, Information Systems, Software Systems)		PhD (p. 905)	ST

Computer and Systems Security		PSM (not currently accepting applications) (p. 300), Cert. (not currently open for enrollment) (p. 325)	EN
Conflict Management and Dispute Resolution		Cert. (p. 448)	CO
Conflict Process		Cert. (p. 269)	ED
Construction Engineering Technology	BSCET		EN
Construction Engineering Technology (Cooperative Education Program)	BSCET		EN
Content Creation	Minor		CO
Corporate Compliance and Ethics		MS (not currently accepting applications) (p. 124)	BU
Corporate Compliance and Regulatory Policy	Minor		BU
Corporate Instructional Design		Cert. (not currently open for enrollment) (p. 152)	BU
Counseling Psychology (Mental Health Counseling*, School Counseling*)		MEd* (p. 198), PhD (not currently accepting applications) (p. 200)	ED
Creative Entrepreneurship	Cert.		TA
Creative Writing	Minor	MFA (p. 369)	LA
Crime Science		Cert. (not currently open for enrollment) (p. 426)	LA
Criminal Justice	BA, Minor	MA (p. 371), PhD (p. 373)	LA
Cultural Analytics		Cert. (p. 449)	CO
Cyber Defense and Information Assurance		PSM (p. 910), Cert. (p. 938)	ST
Cybersecurity and Human Behavior	Cert.		LA
Dance	BFA, Minor, Cert.	MA (p. 484), MFA (p. 486), PhD (p. 488)	BC
Data Science (Computation and Modeling)	BS		ST
Data Science (Computational Analytics)	BS		ST
Data Science (Genomics and Bioinformatics)	BS		ST
Data Science: Computational Analytics	Cert., Minor		ST
Data-Driven Decision Making		Cert. (p. 270)	ED
Decision Neuroscience		MS (not open for direct admission) (p. 124), PhD (p. 125)	BU
Decision Neuroscience		MS (not open for direct admission) (p. 376), PhD (p. 376)	LA
Dental Public Health		Cert. (p. 170)	DN
Dentistry		DMD (p. 160)	DN
Dentistry/Advanced Standing Program for Internationally Trained Dentists		DMD (p. 163)	DN
Destination Management		Cert. (p. 947)	TH
Digital Marketing	Minor	MS (p. 127)	BU

Digital Media Engagement	Minor		CO
Digital Media Technologies	Minor		ST, CO
Disability Studies		Cert. (p. 271)	ED
Diversity Leadership in Higher Education		Cert. (p. 272)	ED
Diversity and Inclusion	Cert.		ED
Diversity, Equity and Inclusive Leadership in Organizations		Cert. (p. 152)	BU
Documentary Arts and Ethnographic Research		Cert. (p. 726)	CA
Documentary Arts and Visual Research		PhD (p. 708)	CA
Drug Development		Cert. (p. 760)	PH
Early Childhood Education		MEd (p. 200)	ED
Early Childhood Education and Special Education		MEd (p. 201)	ED
Early Childhood-Elementary Ed (PreK-4)	BSEd		ED
Early Childhood-Elementary Ed (PreK-4) (Special Education)	BSEd		ED
Earth and Space Science with Teaching	BS		ST
Ecological Planning and Design	Minor		TA
Ecology, Evolution and Biodiversity	BS		ST
Economics	BBA, Minor		BU
Economics (Econometrics*, Health Economics*, International Economics*, Labor*, Quantitative Macroeconomics*)	BA, Minor	MA* (not currently accepting applications) (p. 379), PhD (not currently accepting applications) (p. 379)	LA
Education	Minor		ED
Education/Applied Linguistics		PhD (p. 203)	ED
Education/Educational Psychology		PhD (p. 205)	ED
Education/Literacy and Learners		PhD (p. 207)	ED
Education/Science, Mathematics and Educational Technology		PhD (p. 209)	ED
Education/Special Education		PhD (p. 211)	ED
Educational Leadership (K-12*, Higher Education*)		MEd* (open only to students in Jamaica in collaboration with Church Teachers' College) (p. 213), EdD (p. 214)	ED
Educational Leadership and Policy		MEd (p. 218)	ED
Electrical Engineering	BSEE	MSEE (p. 300), PhD (p. 303)	EN
Electrical Engineering (Bioelectrical Engineering with Cooperative Education Program)	BSEE		EN

Electrical Engineering (Bioelectrical Engineering)	BSEE		EN
Electrical Engineering (Computer Engineering with Cooperative Education Program)	BSEE		EN
Electrical Engineering (Computer Engineering)	BSEE		EN
Electrical Engineering (Cooperative Education Program)	BSEE		EN
Emergency and Sports Injury Management	Cert.		HP
Employee Benefits Law		Cert. (p. 347)	LW
Endodontics		Cert. (p. 172)	DN
Engineering	BSE	MEng (p. 307)	EN
Engineering (Electromechanical Engineering)	BSE		EN
Engineering (Energy and Power Engineering)	BSE		EN
Engineering Management		MS (p. 309), Cert. (p. 325)	EN
Engineering Project Management		Cert. (p. 326)	EN
Engineering Technology	BSET		EN
Engineering Technology (Cooperative Education Program)	BSET		EN
English	BA, Minor	MA (p. 379), PhD (p. 380)	LA
English Education/7-12		Cert. (not currently open for enrollment)	ED
English Language Teaching	Cert.	Cert. (p. 274)	ED
English as a Second Language	Cert.	Cert. (p. 273)	ED
Entertainment Industry Studies	Cert.		CA
Entrepreneurship and Innovation Management	BBA, Minor, Cert.		BU
Environmental Engineering	BSEnVE, Minor	MSEnVE (p. 311), PhD (p. 314)	EN
Environmental Geoscience		MS (p. 912)	ST
Environmental Health		MPH (p. 799), MS (not currently accepting applications) (p. 802)	HP
Environmental Horticulture	Minor		TA
Environmental Professional Training	Cert.		ST
Environmental Science (Applied Ecology)	BS		ST
Environmental Science (Climate)	BS		ST
Environmental Science (Environmental Geochemistry)	BS		ST
Environmental Science (Hydrology)	BS		ST



Environmental Studies	BA, Minor		LA
Environmental Sustainability	Cert.		TA
Epidemiology		MPH (p. 803), MS (p. 806), PhD (p. 808)	HP
Esports	Cert.		TH
Estate Planning		Cert. (p. 348)	LW
Ethics	Cert.		LA
Event Management		Cert. (p. 948)	TH
Event and Entertainment Management	Cert., Minor		TH
Event and Entertainment Management (Live Entertainment*, Tourism and Hospitality Management*)	BS*		TH
Exercise and Sport Science	BS		HP
Facilities Management	BS		TA
Facilities Planning (Health Facilities)		MS (p. 59)	TA
Fibers and Material Studies with Entrepreneurial Studies	BFA		TA
Fibers and Materials Studies (Art Education*)	BFA, Conc.*	MFA (p. 61)	TA
Film	Cert.		CA
Film and Media Arts (Cinematic Arts: Narrative and Documentary*, Media Arts*, Screenwriting*)	BA	MFA* (p. 711)	CA
Film and Media Arts (Cinematography)	BA		CA
Film and Media Arts (Directing)	BFA		CA
Film and Media Arts (Media Arts)	BFA		CA
Film and Media Arts (Post Production)	BA		CA
Film and Media Arts (Producing)	BA		CA
Film and Media Arts (Screen Studies)	BA		CA
Film and Media Arts (Screenwriting)	BFA		CA
Finance	BBA, Minor	MS (open only to students affiliated with an international partner institution) (p. 129)	BU
Financial Analysis		MS (p. 129)	BU
Financial Analysis and Quantitative Risk Management		MS (p. 132)	BU
Financial Planning	BBA		BU
Food Regulatory Affairs and Quality Assurance		Cert. (p. 761), Post-Master's Cert. (p. 775)	PH
Forensic Chemistry		PSM (p. 913), Cert. (p. 939)	ST
French	BA, Minor, Cert.		LA
Fundamentals of Physics	Cert.		ST
Fundamentals of Programming	Cert.		ST

Gender, Sexuality and Women's Studies	BA, Minor, Cert.	Cert. (p. 427)	LA
General Business Studies	Minor		BU
General Program (active in Japan)	AA, BA		LA
General Science and Technology with Teaching	BS		ST
General Science with Teaching	BS		ST
General Studies	BGS		UC
Generic Drugs		Cert. (p. 762), Post-Master's Cert. (p. 776)	PH
Genomic Medicine (Pre-Medicine*)	BS, Conc.*, Cert.		ST
Geographic Information Systems	Cert.	PSM (p. 383), Cert. (p. 428)	LA
Geography		MA (p. 384), PhD (p. 386)	LA
Geography and Urban Studies	BA, Minor		LA
Geography of Sports, Recreation and Tourism Planning	Cert.		LA
Geography of Tourism	Cert.		LA
Geology	BA, BS, Minor	MS (p. 915)	ST
Geoscience		PhD (p. 916)	ST
Geospatial Data Science		PSM (p. 388), Cert. (p. 429)	LA
German	Cert.		LA
German Language and Cultural Studies	BA, Minor		LA
Glass (Art Education*)	BFA, Conc.*	MFA (p. 63)	TA
Glass with Entrepreneurial Studies	BFA		TA
Global Clinical and Pharmacovigilance Regulations		MS (p. 732)	PH
Global Communication and Media Arts	Minor		CO
Global Finance		MS (not open for direct admission) (p. 135), DS (not currently accepting applications) (p. 135)	BU
Global Health	Minor	Cert. (p. 871)	HP
Global Pharmacovigilance/Benefit-Risk Management		Cert. (p. 763), Post-Master's Cert. (p. 777)	PH
Global Studies (Global Cultures*, Global Economy*, Global Security*)	BA*, Minor		LA
Global Tourism		Cert. (p. 948)	TH
Graphic and Interactive Design (Art Education*)	BFA, Conc.*	MFA (p. 65)	TA
Graphic and Interactive Design with Entrepreneurial Studies	BFA		TA
Health Administration		MHA (p. 135)	BU
Health Facilities Planning		Cert. (p. 78)	TA

Health Informatics		MS (p. 813), PhD (p. 816), Cert. (p. 872)	HP
Health Information Management	BSHIM, Minor		HP
Health Policy and Health Services Research		PhD (p. 820)	HP
Health Policy and Management	Minor	MPH (p. 824)	HP
Health Professions	BS		HP
Health Research	Cert.		LA
Health Studies	BA		HP
Healthcare Financial Management		MS (not currently accepting applications) (p. 137)	BU
Healthcare Innovation Management		Cert. (p. 153)	BU
Healthcare Management	Minor		BU
High-Performance Computing for Scientific Applications		PSM (p. 918), Cert. (p. 940)	ST
Higher Education		MEd (p. 219), EdD (p. 221)	ED
Hip Hop Dance and Culture	Minor		BC
Historic Preservation	BS, Cert.		TA
History (Public History*)	BA, Minor	MA* (p. 390), PhD (p. 392)	LA
Horticultural Therapy	Cert.		TA
Horticulture	AS, BS		TA
Hospitality Management		MS (not currently accepting applications) (p. 945)	TH
Human Development and Community Engagement (Applied Behavior Analysis*, Community Education*, Human Services*, Non-Profit Management and Social Entrepreneurship*)	BS*, Minor		ED
Human Resource Management	BBA	MS (p. 137), Cert. (p. 155)	BU
Industrial and Systems Engineering	BSISE		EN
Information Science and Technology	BA, BS, Minor	MS (p. 920), Cert. (p. 940)	ST
Information Technology Auditing and Cyber Security (Information Technology Auditing*, Cyber Security*)		MS* (p. 139), Cert. (p. 156)	BU
Innovation Management and Entrepreneurship		MS (p. 141), Cert. (p. 157)	BU
Institutional Effectiveness		Cert. (p. 275)	ED
Instructional Coaching Endorsement		Cert. (not currently open for enrollment)	ED
Instructional Learning Technology		Cert. (p. 276)	ED
Instrumental Conducting: Wind-Band Emphasis		MM (p. 491)	BC
Interdisciplinary German Studies	BA, Minor		LA
Interdisciplinary Health Communication		Cert. (p. 873)	HP

Interdisciplinary Studies/ Liberal Arts	BA		LA
International Affairs (active in Japan)	BA		LA
International Business (International Economics)	BBA		BU
International Business (International Entrepreneurship)	BBA		BU
International Business (International Finance)	BBA		BU
International Business (International Marketing)	BBA		BU
International Business (International Sales and Business Development)	BBA		BU
International Business (International Supply Chain Management Transportation and Logistics)	BBA		BU
International Business Administration	Minor		BU
International Business Studies (active in Japan)	BS		LA
International Business and Compliance		Cert. (p. 349)	LW
International Communication	Minor		CO
International Law (TU Japan)		Cert. (p. 350)	LW
Italian	BA, Minor, Cert.		LA
Italian Studies	BA, Minor		LA
Japanese	BA (active in Japan), Minor, Cert.		LA
Jazz Arranging	Cert.		BC
Jazz Improvisation	Cert.		BC
Jazz Piano	Cert.		BC
Jazz Studies (Bassoon, Cello, Clarinet, Double Bass, Euphonium, Flute, French Horn, Guitar, Harp, Oboe, Percussion, Piano, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin, Voice)		MM (p. 494)	BC
Jazz Studies Composition	Cert.		BC
Jazz Studies/Composition (Bassoon, Cello, Clarinet, Double Bass, Euphonium, Flute, French Horn, Guitar, Harp, Oboe, Percussion, Piano, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin, Voice)	BM		BC

Jazz Studies/Performance (Bassoon, Cello, Clarinet, Double Bass, Euphonium, Flute, French Horn, Guitar, Harp, Oboe, Percussion, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin)	BM		BC
Jazz Studies/Performance (Piano)	BM		BC
Jazz Studies/Performance (Voice)	BM		BC
Jazz Voice	Cert.		BC
Jewish Secular Studies	Cert.		LA
Jewish Studies	BA (not currently accepting applications), Minor		LA
Journalism (International Communication*)	BA, Conc.*	MJ (p. 441)	CO
Journalism, Society and Culture	Minor		CO
Kinesiology	BS		HP
Landscape Architecture (Horticulture*)	BS, Conc.*	MLArch (p. 66)	TA
Landscape Plants	Cert.		TA
Landscape Studies	Minor		TA
Language and Cross-Cultural Communication	Cert.		LA
Latin American Studies	BA, Minor, Cert.		LA
Law		JD (p. 336), SJD (p. 339)	LW
Leadership	Minor		CO
Leadership and Military Science	Cert.		ED
Leadership in Instructional Technology for Higher Education		Cert. (p. 278)	ED
Legal Education		LLM (not currently open for enrollment) (p. 341)	LW
Legal Studies	BBA, Minor		BU
Lesbian, Gay, Bisexual and Transgender Studies	Minor		LA
Liberal Arts		MLA (p. 395)	LA
Liberal Studies	BA		LA
Linguistics	Cert.		HP
Management (TU Japan)		MiM (p. 144)	BU
Management Career	Cert.		LA
Management Consulting		Cert. (not currently open for enrollment) (p. 158)	BU
Management Information Systems	BBA, Minor, Cert.	MS (not currently accepting applications) (p. 145)	BU
Marketing	BBA, Minor		BU
Marketing Research and Analytics		MS (not currently accepting applications) (p. 145)	BU
Materials Science	BS		ST
Maternal and Child Health		Cert. (p. 875)	HP
Mathematical Economics (CLA)	BA		LA

Mathematical Economics (CST)	BA		ST
Mathematics (Applied and Computational Mathematics*)	BA, BS, BA/MS (5 year), BS/MS (5 year), Minor	MS* (p. 922), PhD (p. 924)	ST
Mathematics Education/7-12		Cert. (not currently open for enrollment)	ED
Mathematics and Computer Science	BS		ST
Mathematics and Computer Science with Teaching	BS		ST
Mathematics and Physics	BS		ST
Mathematics and Technology with Teaching	BS		ST
Mathematics for Teaching		Cert. (p. 941)	ST
Mathematics with Teaching	BS		ST
Mechanical Engineering	BSME	MSME (p. 318), PhD (p. 321)	EN
Mechanical Engineering (Cooperative Education Program)	BSME		EN
Mechanical Engineering Technology	BSMET		EN
Media Arts	Cert.		CA
Media Studies and Production		MA (p. 445)	CO
Media Studies and Production (Media Analysis, International Communication*)	BA, Conc.*		CO
Media Studies and Production (Media Business, International Communication*)	BA, Conc.*		CO
Media Studies and Production (Media Production, International Communication*)	BA, Conc.*		CO
Media and Communication		PhD (p. 443)	CO
MediaXarts: Cinema for New Technologies and Environments		MA (p. 713)	CA
Medical Device		Cert. (p. 764), Post-Master's Cert. (p. 778)	PH
Medicine		MD (p. 463)	ME
Medicine Combination		PhD/MD	ME
Metals/Jewelry/CAD-CAM (Art Education*)	BFA, Conc.*	MFA (p. 70)	TA
Metals/Jewelry/CAD-CAM with Entrepreneurial Studies	BFA		TA
Middle Grades Education/4-8		Cert. (not currently open for enrollment)	ED
Middle Grades Education/ Language Arts	BSEd	MEd (p. 223)	ED
Middle Grades Education/ Mathematics	BSEd	MEd (p. 225)	ED
Middle Grades Education/ Mathematics and Language Arts	BSEd	MEd (p. 227)	ED

Middle Grades Education/ Mathematics and Science	BSEd	MEd (p. 229)	ED
Middle Grades Education/ Science	BSEd	MEd (p. 231)	ED
Middle Grades Education/ Science and Language Arts	BSEd	MEd (p. 233)	ED
Middle Grades Education/ Social Studies	BSEd	MEd (p. 235)	ED
Middle Grades Education/ Social Studies and Language Arts		MEd (p. 237)	ED
Middle Grades Education/ Social Studies and Mathematics		MEd (p. 239)	ED
Middle Grades Education/ Social Studies and Science		MEd (p. 241)	ED
Mobile Application Development	Cert.		ST
Music (Composition*, Music Studies*, Music Theory*, Musicology*)	BS, Minor, Cert.	MA (p. 497), MS (p. 499), PhD* (p. 501)	BC
Music Composition	BM, Cert.	MM (p. 506)	BC
Music Education (Bassoon*, Cello*, Clarinet*, Classical Guitar*, Double Bass*, Euphonium*, Flute*, French Horn*, Harp*, Harpsichord*, Oboe*, Percussion*, Piano*, Saxophone*, Trombone*, Trumpet*, Tuba*, Viola*, Violin*, Voice*)	BM*	MM (p. 509), PhD (p. 512)	BC
Music Education/Jazz (Bassoon, Cello, Clarinet, Double Bass, Euphonium, Flute, French Horn, Guitar, Harp, Oboe, Percussion, Piano, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin, Voice)	BM		BC
Music History (Bassoon*, Cello*, Clarinet*, Classical Guitar*, Double Bass*, Euphonium*, Flute*, French Horn*, Harp*, Harpsichord*, Oboe*, Percussion*, Piano*, Saxophone*, Trombone*, Trumpet*, Tuba*, Viola*, Violin*, Voice*)	BM*, Cert.	MM (p. 516)	BC
Music Performance (Bassoon, Cello, Clarinet, Classical Guitar, Double Bass, Euphonium, Flute, French Horn, Harp, Harpsichord, Oboe, Percussion, Piano, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin, Voice)	BM, Cert., Diploma		BC

Music Performance (Classical BM Guitar)			BC
Music Performance (Harpichord)	BM		BC
Music Performance (Piano)	BM		BC
Music Performance (Voice)	BM		BC
Music Performance/Bassoon		MM (p. 519), DMA (p. 585)	BC
Music Performance/Cello		MM (p. 522), DMA (p. 590)	BC
Music Performance/Clarinet		MM (p. 525), DMA (p. 594)	BC
Music Performance/Classical Guitar		MM (p. 529)	BC
Music Performance/Double Bass		MM (p. 532), DMA (p. 599)	BC
Music Performance/Euphonium		MM (p. 535), DMA (p. 603)	BC
Music Performance/Flute		MM (p. 539), DMA (p. 608)	BC
Music Performance/French Horn		MM (p. 542), DMA (p. 612)	BC
Music Performance/Harp		MM (p. 545), DMA (p. 616)	BC
Music Performance/Harpichord		MM (p. 548)	BC
Music Performance/Historical Keyboard		DMA (p. 621)	BC
Music Performance/Oboe		MM (p. 552), DMA (p. 625)	BC
Music Performance/Percussion		MM (p. 555), DMA (p. 630)	BC
Music Performance/Piano		MM (p. 559), DMA (p. 634)	BC
Music Performance/Saxophone		MM (p. 562)	BC
Music Performance/Trombone		MM (p. 566), DMA (p. 638)	BC
Music Performance/Trumpet		MM (p. 569), DMA (p. 643)	BC
Music Performance/Tuba		MM (p. 572), DMA (p. 647)	BC
Music Performance/Viola		MM (p. 575), DMA (p. 652)	BC
Music Performance/Violin		MM (p. 579), DMA (p. 656)	BC
Music Performance/Voice		MM (p. 582), DMA (p. 661)	BC
Music Teaching		Cert. (p. 701)	BC
Music Technology	BS, Cert.	MS (p. 665)	BC
Music Technology (Interdisciplinary Studies)	BS		BC
Music Theory (Bassoon*, Cello*, Clarinet*, Classical Guitar*, Double Bass*, Euphonium*, Flute*, French Horn*, Harp*, Harpsichord*, Oboe*, Percussion*, Piano*, Saxophone*, Trombone*, Trumpet*, Tuba*, Viola*, Violin*, Voice*)	BM*	MM (p. 668)	BC
Music Theory (Jazz)	Cert.		BC
Music Theory (Traditional)	Cert.		BC



Music Therapy (Bassoon*, Cello*, Clarinet*, Classical Guitar*, Double Bass*, Euphonium*, Flute*, French Horn*, Harp*, Harpsichord*, Oboe*, Percussion*, Piano*, Saxophone*, Trombone*, Trumpet*, Tuba*, Viola*, Violin*, Voice*)	BM*	MMT (p. 671), PhD (p. 675)	BC
Music Therapy/Jazz (Bassoon, Cello, Clarinet, Double Bass, Euphonium, Flute, French Horn, Guitar, Oboe, Percussion, Piano, Saxophone, Trombone, Trumpet, Tuba, Viola, Violin, Voice)	BM		BC
Musical Theater	BFA		CA
Musical Theater Collaboration (Bookwriting, Composing/Lyricist, Directing)		MFA (applications accepted every 3 years with next admission for Fall 2025) (p. 715)	CA
Narrative Medicine		Cert. (p. 470)	ME
Native Perennial Garden Design	Cert.		TA
Natural Sciences	Minor		ST
Natural Sciences (Biology)	BA, BS		ST
Natural Sciences (Chemistry)	BA, BS		ST
Natural Sciences (Earth and Environmental Sciences)	BA, BS		ST
Natural Sciences (Physics)	BA, BS		ST
Neuromotor Science		MS (p. 828), PhD (p. 830)	HP
Neuroscience		Cert. (p. 430)	LA
Neuroscience Research	Minor		LA
Neuroscience: Cellular and Molecular	BS		ST
Neuroscience: Systems, Behavior and Plasticity	BS	MS (p. 397)	LA
New Product Development		Cert. (p. 327)	EN
Non-Profit Management		Cert. (p. 431)	LA
Nursing (Adult-Gerontology Primary Care Nurse Practitioner*, Family and Individual Across the Lifespan Nurse Practitioner*, Health Systems Leadership*)	BSN	DNP* (p. 833)	HP
Nutrition	Minor	MPH (p. 837), Cert. (p. 876)	HP
Occupational Therapy		OTD (p. 840)	HP
Occupational Therapy Transitional Program		OTD (p. 843)	HP
Opera		MM (p. 678)	BC
Oral Health Sciences		MS (p. 164)	DN
Oral and Maxillofacial Surgery		Cert. (p. 174)	DN
Orchestral Music	Cert.		BC
Organizational Leadership	Minor	Cert. (p. 158)	BU
Orthodontics		Cert. (p. 176)	DN

Painting (Art Education*)	BFA, Conc.*	MFA (p. 71)	TA
Painting with Entrepreneurial Studies	BFA		TA
Performing Arts	Cert.		BC
Periodontics		Cert. (p. 179)	DN
Pharmaceutical Labeling, Advertising and Promotions		Cert. (p. 765), Post-Master's Cert. (p. 779)	PH
Pharmaceutical Manufacturing: Process Development and Analysis		Cert. (p. 766), Post-Master's Cert. (p. 780)	PH
Pharmaceutical Regulatory Sciences		MS (p. 734)	PH
Pharmaceutical Sciences	BS		ST
Pharmaceutical Sciences/Medicinal Chemistry		MS (p. 735), PhD (p. 741)	PH
Pharmaceutical Sciences/Pharmaceutics		MS (p. 737), PhD (p. 743)	PH
Pharmaceutical Sciences/Pharmacodynamics		MS (p. 739), PhD (p. 746)	PH
Pharmaceutical Sciences/Regulatory Affairs and Quality Assurance		PhD (p. 748)	PH
Pharmacy		PharmD (p. 751)	PH
Philosophy	BA, Minor	MA (p. 398), PhD (p. 399)	LA
Photography (Art Education*)	BFA, Conc.*	MFA (p. 73)	TA
Photography with Entrepreneurial Studies	BFA		TA
Physical Therapy		DPT (p. 845)	HP
Physician Assistant		MMS (p. 465)	ME
Physics	BA, BS, BA/MS, BS/MS, Minor	MS (p. 927), PhD (p. 929)	ST
Physics with Teaching	BS		ST
Piano Pedagogy	BM (not currently open for enrollment)	MM (p. 681)	BC
Piano Performance and Music Theory		MM (p. 684)	BC
Piano Performance/Collaborative Piano and Chamber Music		MM (p. 688)	BC
Piano Performance/Piano Pedagogy		MM (p. 692)	BC
Play Therapy		Cert.	UC
Podiatric Medicine		DPM (p. 784)	PM
Police Leadership		Cert. (not currently open for enrollment) (p. 432)	LA
Policy and Organizational Studies (Adult and Organizational Development, Higher Education, Urban Education)		PhD (p. 243)	ED
Political Economy	Cert.		LA
Political Science	BA, Minor	MA (p. 402), PhD (p. 403)	LA
Portuguese	Minor		LA
Printmaking (Art Education*)	BFA, Conc.*	MFA (p. 75)	TA
Printmaking with Entrepreneurial Studies	BFA		TA

Professional Health Education (The Scholarship of Teaching and Learning in Health-Based Instruction*)		MSEd* (p. 245), Cert. (p. 279)	ED
Professional Studies (Brass, Cello, Classical Guitar, Double Bass, Historical Keyboard Instruments, Opera, Percussion, Piano, Viola, Violin, Voice, Woodwinds)		Cert. (p. 704)	BC
Professional Writing	Cert.		LA
Prosthodontics		Cert. (p. 181)	DN
Psychological Research		MS (p. 407)	LA
Psychological Studies (active in Japan)	BA, Minor		LA
Psychology (Quantitative Methods*)	BA, Minor	MA (not open for direct admission) (p. 409), PhD* (p. 409)	LA
Psychology/Neuroscience		PhD	LA
Public Health	BS, Minor		HP
Public Health Data Science		MS (p. 848)	HP
Public Health Law Research		Cert. (p. 877)	HP
Public Health Preparedness and Response		Cert. (p. 878)	HP
Public Policy	Minor	MPP (p. 412), Cert. (p. 432)	LA
Public Relations (International Communication*)	BA, Conc.*, Minor	Cert. (p. 451)	CO
Quantitative Finance and Risk Management		MS (p. 145)	BU
Real Estate	BBA, Minor	MS (not currently accepting applications) (p. 148), Cert. (not currently open for enrollment) (p. 159)	BU
Recreational Therapy	BS	MS (p. 850)	HP
Regulatory Affairs and Quality Assurance		MS (p. 754)	PH
Religion	BA, Minor	MA (p. 414), PhD (not currently accepting applications) (p. 416)	LA
Risk Management and Insurance (Healthcare Risk Management)	BBA		BU
Risk Management and Insurance (Human Capital Risk)	BBA	MS (not currently accepting applications) (p. 148)	BU
Risk Management and Insurance (Managing Corporate Risk)	BBA		BU
Sales	Minor		BU
School Psychology		MEd (not open for direct admission) (p. 247), EdS (p. 248), PhD (p. 249)	ED
Science Education/7-12		Cert. (not currently open for enrollment)	ED

Science and Technology Writing	Cert.		ST
Scientific Writing		PSM (p. 930), Cert. (p. 942)	ST
Screen Studies	Cert., Minor		CA
Sculpture (Art Education*)	BFA, Conc.*	MFA (p. 77)	TA
Sculpture with Entrepreneurial Studies	BFA		TA
Secondary Education/English Education	BSEd	MEd (p. 252)	ED
Secondary Education/Mathematics Education	BSEd	MEd (p. 254)	ED
Secondary Education/Science Education		MEd (p. 256)	ED
Secondary Education/Social Studies Education	BSEd	MEd (p. 258)	ED
Secondary Education/World Languages Education	BSEd		ED
Secondary Education/World/Foreign Languages Education		MEd (p. 259)	ED
Service Excellence		Cert. (p. 949)	TH
Social Science Research	Cert.		LA
Social Studies Education/7-12		Cert. (not currently open for enrollment)	ED
Social Work	BSW	MSW (p. 861)	SW
Social and Behavioral Sciences		MPH (p. 853), PhD (p. 857)	HP
Sociology	BA, Minor	MA (p. 418), PhD (p. 420)	LA
Sociology of Health	Minor		LA
Spanish	BA, Minor, Cert.	MA (p. 423), PhD (p. 424)	LA
Spanish and Latin American Studies for Business	Cert.		LA
Spanish and Latinx Studies for Health and Human Services Professions	Cert.		LA
Spanish for Health Professions		Cert. (p. 434)	LA
Special Education		MEd (p. 261)	ED
Special Education (Pre-K-12)	BSEd		ED
Specialized Studies in Science and Mathematics	Post-Secondary Cert.		UC
Speech, Language and Hearing Science	BA	MA (p. 865)	HP
Sport Business (Athletics Administration, Recreation and Event Management, Sport Analytics, Sport Marketing and Promotions)		MS (p. 945)	TH
Sport Business Executive Program		MS (not currently accepting applications) (p. 947)	TH
Sport Management	Cert., Minor		TH
Sport Marketing	Cert.		TH

Sport and Recreation Management (Esports*, Event Management*, Governance and Policy*, Sport and Recreation Promotion*)	BS*		TH
Sports Media	Cert.		CO
Sports and Society	Cert.		LA
Stage Management	Cert.		CA
Statistical Science and Data Analytics	BS, Minor		BU
Statistics		MS (not open for direct admission) (p. 148), PhD (p. 148)	BU
Statistics and Data Science		MS (not currently accepting applications) (p. 151)	BU
Sterile Process Manufacturing		Cert. (p. 767), Post-Master's Cert. (p. 781)	PH
Stormwater Management		Cert. (p. 327)	EN
Strategic Communication and Cross-Cultural Leadership		Cert. (p. 452)	CO
String Pedagogy		MM (p. 696)	BC
Student Affairs Leadership		Cert. (p. 280)	ED
Superintendency		Cert. (p. 281)	ED
Supply Chain Management	BBA, Minor		BU
Sustainability	Cert.		UC
Sustainable Community Planning		Cert. (p. 79)	TA
Sustainable Food Systems	Cert., Minor		TA
Taxation		MS (p. 342) LLM (p. 341)	LW
Teaching Art Education		Post-Master's Cert. (p. 81)	TA
Teaching English to Speakers of Other Languages		MSEd (p. 264)	ED
Teaching in Higher Education		Cert. (p. 281)	ED
Teaching in Higher Education for the Creative Disciplines		Cert. (p. 282)	ED
Technical Production and Management	BFA		CA
Theater (Acting*, Design and Production*, Directing*)	BA*, Minor		CA
Theater Education	Cert.		CA
Theater Instruction		MA (p. 724), Cert. (p. 727)	CA
Theater and Community Engagement	Cert.		CA
Theater/Acting		MFA (applications accepted every 3 years with next admission for Fall 2025) (p. 718)	CA
Theater/Design		MFA (p. 719)	CA
Theater/Directing		MFA (applications accepted every 3 years with next admission for Fall 2025) (p. 721)	CA

Theater/Playwriting		MFA (applications accepted every 3 years with next admission for Fall 2025) (p. 723)	CA
Tourism Analytics		Cert. (p. 950)	TH
Tourism and Hospitality Management (2+2 program, active in Japan)	BS		TH
Tourism and Hospitality Management (Destination Management*, Event Management*, Hospitality Operations*)	BS*, Cert., Minor		TH
Transnational Law		LLM (p. 343)	LW
Transportation Planning		Cert. (p. 80)	TA
Travel and Tourism		MS (not currently accepting applications) (p. 947)	TH
Trial Advocacy		LLM (p. 344)	LW
Trial Advocacy and Litigation		Juris Doctor Cert. (p. 353)	LW
Urban Bioethics		MA (p. 468), Cert. (p. 471)	ME
Urban Education		Cert. (p. 283)	ED
Validation Sciences		Cert. (p. 768), Post-Master's Cert. (p. 782)	PH
Virtual Media Management	BA		CO
Visual Anthropology	Minor		LA
Visual Studies	BA		TA
Vocal Arts		MM (p. 698)	BC
Voice and Speech for the Actor	Cert.		CA
World/Foreign Languages Education/K-12		Cert. (not currently open for enrollment)	ED

## Key for Schools and Colleges

BC	Esther Boyer College of Music & Dance in the Center for the Performing & Cinematic Arts
BU	Fox School of Business & Management
CA	School of Theater, Film & Media Arts in the Center for the Performing & Cinematic Arts
CO	Lew Klein College of Media & Communication
DN	Maurice H. Kornberg School of Dentistry
ED	College of Education & Human Development
EN	College of Engineering
HP	College of Public Health
LA	College of Liberal Arts
LW	Beasley School of Law
ME	Lewis Katz School of Medicine
PH	School of Pharmacy
PM	School of Podiatric Medicine
ST	College of Science & Technology
SW	School of Social Work
TA	Tyler School of Art & Architecture
TH	School of Sport, Tourism & Hospitality Management
UC	University College
US	University Studies

## Degree Symbols and Classifications

AA	Associate in Arts
AS	Associate in Science
BA	Bachelor of Arts
BA/MA	Five-year Bachelor's and Master's Program
BA/MS	Five-year Bachelor's and Master's Program
BBA	Bachelor of Business Administration
BFA	Bachelor of Fine Arts
BGS	Bachelor of General Studies
BM	Bachelor of Music
BS	Bachelor of Science
BS/MA	Five-year Bachelor's and Master's Program
BS/MS	Five-year Bachelor's and Master's Program
BSArch	Bachelor of Science in Architecture
BSBioe	Bachelor of Science in Bioengineering
BSCE	Bachelor of Science in Civil Engineering
BSCET	Bachelor of Science in Construction Engineering Technology
BSEng	Bachelor of Science in Engineering
BSEd	Bachelor of Science in Education
BSEnvE	Bachelor of Science in Environmental Engineering
BSEE	Bachelor of Science in Electrical Engineering
BSET	Bachelor of Science in Engineering Technology
BSHIM	Bachelor of Science in Health Information Management
BSISE	Bachelor of Science in Industrial and Systems Engineering
BSME	Bachelor of Science in Mechanical Engineering
BSMET	Bachelor of Science in Mechanical Engineering Technology
BSN	Bachelor of Science in Nursing
BSW	Bachelor of Science in Social Work
DAT	Doctor of Athletic Training
DBA	Doctor of Business Administration
DMA	Doctor of Musical Arts
DMD	Doctor of Dental Medicine
DNP	Doctor of Nursing Practice
DPM	Doctor of Podiatric Medicine
DPT	Doctor of Physical Therapy
DS	Doctor of Science
EdD	Doctor of Education
EdS	Education Specialist
JD	Juris Doctor (first professional degree for law)
LLM	Master of Laws (further specialization after J.D. degree)
MA	Master of Arts
MAcc	Master of Accountancy
MArch	Master of Architecture
MBA	Master of Business Administration
MD	Doctor of Medicine
MEd	Master of Education
MEng	Master of Engineering
METM	Master of Engineering Technology Management
MFA	Master of Fine Arts
MHA	Master of Health Administration
MiM	Master in Management
MJ	Master of Journalism

MLA	Master of Liberal Arts
MLArch	Master of Landscape Architecture
MM	Master of Music
MMS	Master of Medical Science
MMT	Master of Music Therapy
MOT	Master of Occupational Therapy
MPH	Master of Public Health
MPP	Master of Public Policy
MS	Master of Science
MSAT	Master of Science in Athletic Training
MSBioe	Master of Science in Bioengineering
MSCE	Master of Science in Civil Engineering
MSEd	Master of Science in Education
MSEE	Master of Science in Electrical Engineering
MSEnvE	Master of Science in Environmental Engineering
MSME	Master of Science in Mechanical Engineering
MSW	Master of Social Work
MTHM	Master of Tourism and Hospitality Management
OTD	Clinical Doctorate in Occupational Therapy
PhD	Doctor of Philosophy
PharmD	Doctor of Pharmacy
PSM	Professional Science Master's
SJD	Doctor of Juridical Science



# Course Descriptions

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Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

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## Accounting (ACCT)

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**ACCT 5001. Accounting for Managerial and Investment Analysis and Planning. 3 Credit Hours.**

This course presents the concepts of financial and managerial accounting with a "user" (investor or manager) orientation. The course has three parts. The first part provides the accounting cycle and the reporting process, with an emphasis on the valuation bases and structure of the financial statements. The second part focuses on the interpretation and analyses of the financial statements, including analyses of cash flows and cross-sectional and time-series trends in financial ratios. The role of managerial accounting choices in determining the nature of financial reporting and quality of earnings is also examined. The third part examines the role of accounting information for managerial planning and control. Costing for inventory and pricing, cost-volume-profit analyses, and budgeting issues are covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5003. Financial Accounting. 3 Credit Hours.**

This is an introductory course, and there is no expectation that students should possess prior accounting knowledge. The course will introduce you to the fundamental concepts of financial accounting. Financial accounting information is produced, in accordance with generally accepted accounting principles (GAAP), to report the operations of an entity to external users, for example, suppliers, customers, and investors. We will focus on the accounting cycle, the structure of the financial statements, and profitability analysis. In addition, we will discuss recent changes in the reporting environment and contemporary reporting issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5004. Managerial Decision Making Using Accounting Information. 1 to 3 Credit Hour.**

You will learn how to do the following: measure and evaluate performance so as to design incentive mechanisms; estimate the profitability of your branches, products, and customers; make capital investment decisions; design budgets and identify what went wrong or right; and synthesize business strategy with accounting information systems. The focus is on understanding how to use accounting data, rather than how to generate it.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ACCT 5003.

**ACCT 5101. Financial Accounting Theory. 3 to 4 Credit Hours.**

This course provides intensive study of financial accounting theory and generally accepted accounting principles. Areas emphasized are income measurement, valuation of tangible and intangible assets, and accounting for liabilities and shareholders' equity. Proper financial statement presentation and disclosure are covered in detail. This course is also designed to reinforce fundamental concepts in recording business transactions and representing them in financial reports for external constituents and internal managers. It also includes an understanding of financial ratios and other tools to analyze financial statements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302)

**ACCT 5102. Advanced Financial Accounting. 3 Credit Hours.**

This course continues the study of financial accounting begun in Acct 5101. Topics include: income tax allocation, pensions, leases, statement of changes in financial position, inflation accounting, foreign currency translation. Approximately one-half of course devoted to business combinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302)

**ACCT 5107. Accounting for Third Party Reimbursements. 3 Credit Hours.**

Concepts and structure of third-party payment environments are examined for their implications on healthcare institutions. Cost finding and analysis techniques for management application are emphasized. Relationships between rate setting and payment are also studied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302) and HCM 5101.

**ACCT 5108. Acct in an ERP Environment. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5111. Concepts and Analysis of Financial Statements. 3 Credit Hours.**

Analysis of business enterprise through financial statements, concepts, and analysis of related data. Emphasis on the user's point of view. Structured to maximize student's ability to use and analyze financial statements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302)

**ACCT 5112. Federal Taxation. 2 to 3 Credit Hours.**

This course provides an introduction to the concepts and logic underlying federal income tax law. Emphasis is on the determination of income and allowable deductions for business entities (corporations, partnerships, sole proprietorships) and individuals. The course introduces tax planning concepts and includes the study of how taxation impacts business and personal decision making. The course also integrates some financial accounting and finance theory with federal tax law.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302)

**ACCT 5121. Budgeting, Planning and Forecasting. 3 Credit Hours.**

Successful enterprises utilize strategic planning to achieve short, intermediate and long-term goals. This course will focus on budgeting concepts and methodologies. Fixed budgets, flexible budgets, manufacturing budgets and variance analysis will be significant components of this course. Forecasting techniques, such as analysis of the factors that affect planning and achieving strategic goals will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5123. Auditing Theory and Practice. 3 Credit Hours.**

In this course, students study professional auditing standards and ethics, internal control, gathering and documentation of audit evidence, a detailed analysis of auditing procedures applied to major balance sheet and income statement accounts, and the preparation of the auditor's report. Statistical sampling and EDP concepts as they relate to auditing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ACCT 5101.

**ACCT 5125. Applied Data Driven Decision Making. 3 Credit Hours.**

A wide variety of data warehouse appliances are available for analyzing business data. This course will provide a hands-on experience with one or more industry popular software packages including the use of advanced Excel modeling techniques. It will provide an understanding of the principal characteristics and functions of accounting information systems and gains an appreciation of the IT controls that should be in place for the major areas of business activity. The impact of the Sarbanes-Oxley and the necessary controls for various IT systems are examined in detail. Basic concepts of business intelligence and data analytics in a contemporary business environment are examined. The course also provides an introduction to data visualization and design principles for creating meaningful displays of quantitative and qualitative data to facilitate managerial decision-making. Students will work on case studies built on the Excel suite - Power BI, Power Query, DAX. Visualization (Tableau) and SQL students will take a hands-on, case-based approach to learning. Students will discuss and work with current tools and techniques appropriate for use in the following areas: big data, data visualization, robotic process automation, artificial intelligence and other emerging technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5126. Strat Use Equity Comp. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5127. International Financial Reporting Standards (IFRS). 1 to 3 Credit Hour.**

In this course students will develop an understanding of international accounting and International Financial Reporting Standards (IFRS). Students will describe and apply accounting and reporting for significant differences between U.S. GAAP and IFRS. The course will enhance and apply critical thinking skills to key IFRS reporting standards as compared to U.S. GAAP.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5170. Special Topics. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302)

**ACCT 5180. Special Topics. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302)

**ACCT 5182. Independent Study. 1 to 6 Credit Hour.**

Study in particular aspects of accounting under the direct supervision of a graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 5190. Special Topics - Accounting. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 5201. Advanced Studies in Financial Reporting. 3 Credit Hours.**

This course covers generally accepted accounting principles for business enterprises and governmental and nonprofit organizations. It will cover the concepts and standards for financial statements. Pedagogy will include extensive use of accounting case studies. Typical items to be discussed will include recognition, measurement, valuation, and presentation of various elements in financial statements in conformity with GAAP.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5202. Enterprise Systems and Data Analytics. 3 Credit Hours.**

This course provides an understanding of the principal characteristics and functions of accounting information systems and gains an appreciation of the IT controls that should be in place for the major areas of business activity. The impact of the Sarbanes-Oxley and the necessary controls for various IT systems are examined in detail. Basic concepts of business intelligence and data analytics in a contemporary business environment are examined. The course also provides an introduction to data visualization and design principles for creating meaningful displays of quantitative and qualitative data to facilitate managerial decision-making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5203. Professional Skills Development. 1 to 4 Credit Hour.**

This course is designed to impart important communication and professional skills. Students will focus on personal development of specific abilities that are instrumental for effective communication in professional positions. Students will focus on the development of specific skills, such as communication (written and oral), team building, and leadership, technology and Excel proficiency.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5204. Advanced Auditing and Assurance Services. 3 Credit Hours.**

This course is designed to prepare students to successfully plan and perform various attestation services. This course will cover the generally accepted auditing standards and procedures, forensic accounting and fraud and include contemporary issues in auditing. Pedagogy will include extensive use of case studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5205. Advanced Federal Taxation. 3 Credit Hours.**

This course focuses on advanced topics in the income taxation of corporations and flow-through business entities (partnerships, subchapter S corporations, limited partnerships, etc.) including formation, allocations, distributions, redemptions, reorganizations and terminations. Additional advanced topics covered include: the personal holding company tax, issues related to brother-sister corporations, penalties for improper accumulation of surplus and consolidated tax returns. The course will develop skills in identifying and researching issues in taxation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5206. Law Ethics & Regulations. 3 Credit Hours.**

This course provides an introduction to the legal and regulatory framework in which businesses and individuals operate. The course covers the basics of business law (agency, contracts, debtors, creditors, etc.) and the general business environment (business structures, management rights and responsibilities, the requirements of the Sarbanes-Oxley Act, etc.).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5207. Concepts and Analysis of Financial Statements. 3 Credit Hours.**

This course focuses on how users of financial statements incorporate accounting data into their financial evaluation. The course will use ratios and other tools to measure profitability and risk. The course will also examine techniques for forecasting future earnings performance as inputs in models of equity valuation. Students will analyze a major US corporation in parallel with class material and will achieve an awareness of current financial reporting issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5208. Strategic Technology and Performance Management. 3 Credit Hours.**

This course provides an overview of the key concepts necessary to understand the role of information technology in business, the impact of economy-wide changes on financial performance, the analysis and implementation of competitive strategy, and systems to control and enhance performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5209. Taxes & Business Strategy. 2 Credit Hours.**

This course examines tax strategies associated with business decisions. The material focuses on a conceptual framework for integrating tax planning into the decision-making process and applying tax planning tools and techniques to business and investment activities, including savings vehicles, business entity choice, financial statement analysis, executive compensation, capital structure, mergers and acquisitions, and international tax planning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5211. Advanced Data Analytics and Innovation in Accounting. 3 Credit Hours.**

This course investigates advanced topics in data analytics and innovation in accounting technology. Students will take a hands-on, case-based approach to learning. Students will discuss and work with current tools and techniques appropriate for use in the following areas: big data, data visualization, robotic process automation, artificial intelligence and other emerging technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ACCT 5202.

**ACCT 5282. Independent Study. 1 to 3 Credit Hour.**

Study in particular aspects of accounting under the direct supervision of a graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (ACCT 5004, ACCT 5402, or ACCT 5302)

**ACCT 5287. Colloquium on Current Issues in Accounting Practice. 1 to 3 Credit Hour.**

Students attend and participate in forums, seminars and conferences on current issues in accounting practice. Professionals from public accounting and industry will speak on topics of current interest in accounting, auditing and income taxes. The Colloquia will be spread throughout the three semesters of the MAcc program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 5411. Financial and Managerial Accounting in Decision Making. 3 Credit Hours.**

This course introduces students to the fundamentals of financial accounting and managerial accounting in the context of decision making. Financial accounting provides an organization's investors and creditor's information they need to make decisions. Financial accounting information is produced, in accordance with generally accepted accounting principles (GAAP). Managerial accounting information is produced in response to specific management needs. Managerial accounting reports the results of operations of an entity consistent with the needs of internal users (managers, supervisors, etc.). The first part of this course focuses on the financial information reported in the financial statements, and basic financial statement analysis. The second part of the course focuses on decision making based on accounting data, and learning basic accounting tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5601. Identifying and Managing Cross-Enterprise Risks. 3 Credit Hours.**

Enterprise Risk Management (ERM) is an integrated process of identifying, assessing, and managing the overall risks of an organization. It leverages integrated governance practices, internal controls, and measurement and reporting systems to manage risk while maximizing shareholder value. This course will explore ERM elements used to identify, assess, manage, and monitor key risks including articulating risk appetites, developing policies and procedures, conducting risk assessments, implementing internal controls, and reporting to management and the board. Students will use case assignments to examine risk assessment and management practices at various organizations and apply risk management tools and techniques to evaluate and make recommendations. Topics will include business aspects (strategic disrupters), control mechanisms (COSO ERM standards), government considerations (statutory and regulatory concerns), and ethical frameworks IMA, AICPA, ACCA).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5611. Applied Management Accounting I. 1.5 Credit Hour.**

This course explores Part One of the standardized CMA exam. Topics include, but are not limited to Financial Planning, Performance and Analytics and the candidate's Body of Knowledge pertaining to external financial reporting decisions, planning, budgeting and forecasting, performance management, cost management, internal controls, technology and analytics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5612. Applied Management Accounting II. 1.5 Credit Hour.**

This course explores Part Two of the standardized CMA exam. Topics include, but are not limited to Financial Management topics and test a candidate's body of knowledge with regard to: financial statement analysis, corporate finance, decision analysis, risk management, investment decisions, professional ethics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5801. Fin Info Reporting & Analysis. 3 Credit Hours.**

This course helps you solidify your knowledge of accounting systems and financial information reporting procedures. You'll increase your comprehension of financial reports and of the practical applications of accounting theories and concepts through in-depth discussion of real-world situations, involving revenue recognition, inventory valuation, intangible assets and reporting for leases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5802. Strategic Cost Analysis for Enterprise Management. 3 Credit Hours.**

Enterprise performance management, analyzing actual financial results against the master budget, is a critical component for providing feedback. The course will focus on cost and variance measures, responsibility centers and reporting segments and performance measures. Additionally, the course will cover cost management considerations including the triple bottom line, balanced scorecard, measurement concepts, costing systems, overhead costs (and allocation), supply chain management concerns and business process improvement. You will advance your ability to use accounting principles and concepts to make better day-to-day business decisions as you examine cost behavior, variable margin, cost-volume-profit relationships, budgeting, break-even and incremental analysis. You will also learn to use capital budgeting and discounted cash flows to determine the acceptability of investment alternatives from a cost/resource perspective.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACCT 5882. Independent Study. 1 to 6 Credit Hour.**

Study in particular aspects of accounting under the direct supervision of a graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in ACCT 5801.

**ACCT 5890. Special Topics. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 9001. Interdisciplinary Accounting Research. 3 Credit Hours.**

The seminar will focus on research methods in contemporary auditing research including the role of corporate governance. It may also include other areas such as not for profit or taxation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 9002. Seminar in Financial Accounting Theory. 3 Credit Hours.**

The seminar focuses on current methodological issues in financial accounting research. In-depth analysis of empirical tests of financial accounting theories. Implications for future research are emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**ACCT 9003. Seminar in Research Methods - Accounting. 3 Credit Hours.**

The seminar focuses on research methods in areas such as Auditing, Managerial Accounting, or Taxation, and may also include behavioral studies in these areas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 9011. Proseminar in Accounting. 1 to 3 Credit Hour.**

This course is designed to investigate a variety of research methods in accounting. Students become familiar with critically reading and analyzing research methodologies used in different papers presented at the department workshops. Through this process, students learn to use what they had learned in previous course(s) and critically read and evaluate empirical research papers in theoretical and empirical areas.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Business Administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 9090. Seminar - Special Topics in Accounting. 1 to 6 Credit Hour.**

This course is designed to investigate a variety of research methods in accounting. Students become familiar with critically reading and analyzing research methodologies used in different papers presented at the department workshops. Through this process, students learn to use what they had learned in previous course(s) and critically read and evaluate empirical research papers in theoretical and empirical areas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACCT 9183. Directed Study in Accounting. 1 to 6 Credit Hour.**

Supervised individual reading and research projects. Often associated with a seminar in which papers on a variety of topics are presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Actuarial Science (AS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**AS 5001. Actuarial Probability. 3 Credit Hours.**

The course discusses probability theory and its application to insurance and risk management problems. Topics covered include: probability laws, combinatorics, conditional probability and independence, Bayes' Theorem, discrete and continuous random variables, common discrete and continuous distributions and their applications, multivariate discrete random variables, distribution of order statistics, linear combinations of independent random variables, and basic insurance concepts of deductibles, coinsurance, benefit limits, and inflation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5015. Introduction to Actuarial Spreadsheets and Programming. 1 Credit Hour.**

The course introduces students to the use of spreadsheets and to the fundamentals of programming, as these skills are becoming crucial for entry-level actuarial positions. Topics covered include managing workbooks, preparing workbooks for collaboration, cell filling, formatting, data validation, advanced conditional formatting and filtering, logical operations in formulas, advanced lookups, advanced date and time functions, data analysis through what-if analysis and forecasting, formula troubleshooting, advanced charting, Pivot Tables, Pivot Charts, create and modify macros, and an introduction to programming concepts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5022. Actuarial Statistics. 3 Credit Hours.**

The course covers advanced probability concepts and the fundamentals of mathematical statistics, as well as their insurance applications. Topics include multivariate continuous distribution, sampling and central limit theorem, estimation methods, construction of confidence interval, hypothesis testing, analysis of variance, and analysis of categorical data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5101. Theory of Interest. 3 Credit Hours.**

This course covers one of the foundational concepts of actuarial science: the time value of money. Students learn about simple, compound, and effective interest rates, and use them to calculate present values and future values of all forms of deterministic cash flows, both discrete and continuous. These techniques are then applied to value annuities, loans, stocks, and bonds. The course also includes a thorough discussion of interest rate risk, how it can be measured, and how insurers can mitigate this risk through asset-liability management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5102. Long-Term Actuarial Modeling. 3 Credit Hours.**

The heart of the traditional actuarial science curriculum, this course examines the pricing of life insurance products by integrating concepts from probability and interest theory. It introduces random variables measuring the future lifetime of a person - from distributions or life tables - and the present values of life insurance and life annuity products, in both discrete-time and continuous-time settings. Students learn to calculate and interpret the mean, variance, and probability functions for these random variables. In addition, students learn to determine actuarially fair premiums and reserves for long-term insurance products. Prior to fall 2022, the course title was "Actuarial Modeling I."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in AS 5101 (may be taken concurrently)

**AS 5103. Advanced Long-Term Actuarial Modeling. 3 Credit Hours.**

The course introduces Markov Chains to extend the pricing and reserving concepts of AS 5102 to multiple lives (e.g. life insurance for a married couple or business partners) and multiple decrements (e.g. modeling different health statuses). The course also includes actuarial applications to pension valuation and profit testing, as well as embedded options in life insurance and annuity products. Prior to fall 2022, the course title was "Actuarial Modeling II."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in AS 5102.

**AS 5104. Short-Term Actuarial Modeling. 3 Credit Hours.**

Focusing on short-term actuarial modeling, the course introduces a variety of frequency, severity, and aggregate loss models. Students learn to select suitable models for a given data set, to parameterize the models to the data, to assess the predictive quality of the models through various measures of confidence, and to estimate losses using credibility theory. Pricing and reserving techniques for short-term insurance products will also be discussed. Prior to fall 2022, the course title was "Actuarial Modeling III."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5105. Actuarial Economics. 3 Credit Hours.**

This course develops the conceptual framework of microeconomics and macroeconomics with some applications in actuarial science. Topics in microeconomics include interaction between supply and demand, consumer behavior, production choices, different types of competition, factor markets, and market failure. Topics in macroeconomics include business cycles, inflation, unemployment, monetary and fiscal policy, balance of payments, international economics, and economic growth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5106. Actuarial Corporate Finance. 2 Credit Hours.**

This course introduces students to the fundamental principles of accounting and corporate finance, from an actuarial perspective. It covers basic accounting principles and regulations, financial statements, investment decision making, the risk-return trade-off, capital structure, long-term financing and investment risk. This provides students with an understanding of how (insurance) companies and financial markets function. The course develops the conceptual framework for corporate finance from an actuarial perspective. Topics include capital budgeting, project analysis, efficient market hypothesis, capital asset pricing model, cost of capital, behavioral finance, capital structure, equity financing and debt financing. Prior to fall 2022, the course title was "Corporate Finance for Actuarial Science."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in AS 5101 (may be taken concurrently)

**AS 5108. Actuarial Analytics. 3 Credit Hours.**

Predictive analytics is a key component of actuarial work. It helps improve solutions to traditional actuarial problems such as forecasting mortality, setting loss reserves, predicting policyholder behavior, and establishing classification ratemaking schemes. Actuaries also use these techniques for improving insurance operations through data-driven decision-making. This course introduces students to statistical learning and linear models, with a focus on applying these tools to actuarial business decisions in an insurance or consulting environment. Topics covered include types of modeling problems, methods of assessing model accuracy, exploratory data analysis, exponential family of distributions, parameter estimation, diagnostic tests of model fit and assumptions, model selection and interpretation, calculation of predicted values and confidence/prediction intervals in the context of ordinary least squares regression, k-nearest neighbors, and generalized linear models. In addition, the course aims to enhance students' programming skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5114. Advanced Short-Term Actuarial Modeling. 3 Credit Hours.**

Building on AS 5104, the course continues the discussion of short-term actuarial modeling. It introduces students to advanced frequency, severity, and aggregate claim models, as well as concepts of pricing and reserving. Topics covered include commonly used severity, frequency distributions, aggregate risk models, coverage modifications, construction and selection of parametric models, estimate losses using advanced credibility procedures, and pricing and reserving methods for short-term insurance contracts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in AS 5104.

**AS 5116. Financial Reporting for Actuaries. 1 Credit Hour.**

This course introduces students to the fundamental principles of accounting and financial reporting from an actuarial perspective. Topics covered include basic accounting concepts and principles, financial statements, and corporate taxation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AS 5118. Advanced Actuarial Analytics. 3 Credit Hours.**

This course continues the discussion of AS 5108. Statistical analysis has become part of the modern actuary's day-to-day responsibilities as they help improve solutions to traditional actuarial problems and quantify insurance operations and business processes that have traditionally relied largely on managers' judgment. Topics to be covered include ridge regression, LASSO regression, weighted/partial least squares models, KNN regression, stochastic time series processes, common time series models including predictions, confidence intervals, and interpretation, principal components analysis, decision trees, including classification trees, bagging, boosting, and random forests, k-means and hierarchical clustering, and simulation. The course will further develop students' programming skills in data analytics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in AS 5108.

**AS 5126. Option Pricing. 1 Credit Hour.**

Financial options are a part of many modern life insurance products. In this course, students learn the fundamentals of option pricing and their risk management. Topics covered include basic call and put options, option strategies, put-call parity, Binomial trees, the Black-Scholes model, and Delta hedging, along with their applications to insurance products.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in AS 5101 (may be taken concurrently)

**AS 5170. Special Topics. 3 Credit Hours.**

Special Topics. Content varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AS 5180. Special Topics. 3 Credit Hours.**

Special Topics. Content varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AS 5182. Independent Study. 1 to 6 Credit Hour.**

Special study in a particular aspect of actuarial science under faculty supervision. Maximum of six hours may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AS 5190. Special Topics in Actuarial Science. 3 Credit Hours.**

Special Topics - Actuarial Science. Content varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AS 5191. Mentored Research. 1 to 6 Credit Hour.**

The student conducts research - broadly related to actuarial science or insurance economics - under the supervision of a faculty member. A maximum of six hours may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AS 5282. Independent Study. 1 to 3 Credit Hour.**

Independent Study. Focus to be determined by instructor and student.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AS 5685. Actuarial Internship. 1 to 3 Credit Hour.**

The student participates in an actuarial internship to gain relevant practical work experience. The internship must be for at least 240 work hours over the course of one semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Adult and Organizational Development (AOD)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**AOD 5301. People-Centered Community Development. 3 Credit Hours.**

People-Centered Community Development offers a broad perspective on community development (CD), focused on the United States of America. The course covers many of the major considerations of CD. We will analyze CD from different standpoints: bureaucratic; research; historical; theoretical; ethnographic; grassroots; activist; policy maker; and, funder. The course emphasizes people-centered, participatory, and holistic approaches to CD. We will explore how intervention strategies, available resources, gender, race, inequity, and competing development ideologies play out in community development. A framework that stresses holism, dialogue, field research, and the emic perspective inspires the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5302. Introduction to Mission-Driven Organizations: Theory and Practice. 3 Credit Hours.**

This course is a graduate-level introduction to theory and practice of the non-profit sector and for-profit organizations focused on social, cultural and environmental change, with a heavy emphasis on practical application. This course will provide an introduction to some of the special management and leadership issues facing these mission-driven organizations. Course readings and discussions will include topics such as writing and fulfilling mission statements, facilitating governance, designing effective fundraising tactics, and engaging in advocacy or lobbying. We will also cover the formation of the nonprofit sector and its differences from public and for-profit sectors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5401. System Dynamics. 3 Credit Hours.**

Frameworks for understanding dynamic social systems that form the bases for research, assessment, planning, intervention, and evaluation of social entities are explored. Linear and nonlinear theories are examined, especially as they may be applied to group and organizational training and development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5402. Negotiating Conflict. 3 Credit Hours.**

The course examines the role of communication in setting where there is an attempt to manage conflict among individuals or groups. The course provides: an overview of social science theory on conflict processes; an understanding of the major forces that influence conflict interaction; an increased ability to negotiate and intervene in difficult conflicts; and an increased awareness of one's own conflict style and personal responses in various conflict settings. In this course, you will have the opportunity to develop more self awareness and to improve your negotiation skills, including: identifying the difference between needs and positions, applying appropriate negotiation and conflict resolution strategies, developing an appreciation for how bias, perception, power, and culture impact dialogue, learning to deal with anger and other behaviors in conflict situations, and gaining a better understanding of your role in these conflict situations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5403. Facilitating Adult Learning. 3 Credit Hours.**

This course examines teaching and learning transactions in adult educational settings and the methods and techniques appropriate for facilitating adult learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5404. Organizational Development. 3 Credit Hours.**

This course integrates psychological theory with tools and methods for understanding organizations, dealing with human capital problems in organizations and for making organizations more effective and more satisfying as places to work. During this course, students will explore evidence-based practice with regard to recruiting and training the best employees, ensuring they are high performers, dealing with performance issues, and ensuring your personnel and management practices conform to various regulations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5515. Conflict Resolution in Education. 3 Credit Hours.**

Educators need to know how to develop safe and constructive learning environments. Effective management of conflict in educational settings and the creation of conflict competence in students and staff are key. This course provides an overview of proven programs in conflict resolution education in K-12 contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5516. Negotiation Processes. 3 Credit Hours.**

Negotiation is a critical skill in any professional or personal context. This course teaches students to engage effectively in cooperative and competitive orientations as a means to negotiate dyadic and multiparty situations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5518. Third-Party Conflict Intervention. 3 Credit Hours.**

This course examines the various ideologies and roles that third parties adopt as they intervene in conflict in interpersonal, group, organizational, or cross-cultural settings. Students learn the fundamentals of various third-party roles, including mediators, arbitrators, ombudspersons, and facilitators. Emphasis is placed on how conflict interveners' purpose drives their practice as they work toward transforming difficult conflicts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5522. Interpersonal Skills Training. 3 Credit Hours.**

This course examines training methods to develop interpersonal and team effectiveness in the workplace. Skills included are understanding others, clear communication, asserting needs, exchanging feedback, influencing, resolving conflict, collaborating, and shifting gears.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5524. Sociocultural Dynamics. 3 Credit Hours.**

This course examines contending frameworks for understanding conditions and dynamics of sociocultural diversity and scenarios for preferred outcomes. Contemporary and evolving issues of human diversity in our global, local, and personal contexts are explored, especially as these relate to professional practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5527. Training Design and Delivery. 3 Credit Hours.**

This course examines the design of training programs in public and private sector organizations. Students learn to design active, experientially based training programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5532. Leadership and Management. 3 Credit Hours.**

This course addresses the theoretical understandings that guide appropriate implementation of professional managerial and facilitative roles in adult and organizational development. Students gain increased clarity regarding contextually appropriate practice of both management and leadership.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5533. Team Development. 3 Credit Hours.**

This course blends academic inquiry and experiential learning in exploring the nature and dimensions of teams. We focus on: Characteristics of teams; Processes of teamwork; Issues teams face; and Organizational context of teams.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5534. Group Facilitation and Consultation. 3 Credit Hours.**

This course focuses on the skills needed to assist groups and teams in their decision-making processes. Students learn both voting and consensus processes and develop the skills needed to facilitate either approach to decision-making. The course also covers a range of specialized formats for assisting group decision-making such as brainstorming, nominal group technique, problem solving, incrementalism, and mixed scanning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5535. Organizational Assessment, Design and Strategy. 3 Credit Hours.**

This course explores applied research and evaluation in organizations. It highlights methods such as surveys, interviews, focus groups, administrative data analysts, and "tests" used for organizational purposes such as employee selection, performance appraisal and employee motivation/satisfaction. Students are expected to explore a relevant organizational research/assessment proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 5540. Current Topics in AOD. 1 to 3 Credit Hour.**

The topics of this course vary. Its inclusion in the curriculum allows faculty and students to explore emerging issues in the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AOD 8101. Training and Organizational Development: Theory and Research. 3 Credit Hours.**

This course is a doctoral level graduate seminar that focuses on critical conceptual and empirical issues facing the field of training and development. The course is structured around major training themes such as training needs assessment, design, evaluation and transfer. The course is not specifically designed to "train" trainers but to give participants an appreciation for the critical research issues that must be addressed in the training literature. To appreciate these issues, participants will also be involved in projects designed to simulate the practical issues and constraints in designing a training program. Thus, the course is based on the principles of action learning and learner control of the learning process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AOD 9187. Practicum in Adult and Organizational Development. 3 Credit Hours.**

This course provides students with the opportunity to translate adult and organizational theory into practice by gaining experience working in contexts in which change and learning are being fostered. Students work under the auspices of the Training and Development Center and are placed in a variety of contexts. This course should be taken near the end of the student's program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AOD 9231. Proseminar in AOD. 3 Credit Hours.**

This capstone course provides students with the opportunity to design and complete a culminating project that applies the principles of AOD theory and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## **Advanced Core Medical Science (ACMS)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ACMS 5003. Fundamentals of Biochemistry. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACMS 5004. Fundamentals of Physiology. 4 Credit Hours.**

Fundamentals of Physiology addresses important topics including membranes and membrane transport, excitation and contraction of skeletal, smooth and cardiac muscle, the heart and blood flow, renal physiology and lung physiology. Important medically related examples will be discussed. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACMS 5006. Microbiology and Immunology. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACMS 5007. Human Anatomy. 4 Credit Hours.**

Human Anatomy provides instruction in gross anatomy for postbac students. Important medically related examples will be discussed. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACMS 5008. Medical Pharmacology. 4 Credit Hours.**

Medical Pharmacology provides instruction in pharmacology for postbac students. Important medically related examples will be discussed. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ACMS 5010. Special Topics in Medicine. 2 to 3 Credit Hours.**

Special Topics in Medicine discusses important topics in medicine including translational research and evidence based medicine for postbac students. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ACMS 5011. Case-based Clinical Problem Solving. 1 Credit Hour.**

A crucial component in training pre-medical students to become effective physicians is developing interactive skills, specifically meaningful patient history taking. This course provides students at the Lewis Katz School of Medicine the opportunity to interact with and receive feedback from standardized patients. Furthermore, the encounter permits the design of learning experiences that integrate the students' understanding of basic science principles with clinical reasoning. This course consists of two parts. The first part provides students with the basic tools for interviewing patients and taking their history. This is accomplished by use of self-study, lectures and one on one interaction with standardized patients. During the second part of the course, students working in teams on specially designed clinical cases reason through and present their diagnosis and reasoning to the class. Included in the clinical case is a session with the simulation mannequins who will be programmed with the appropriate disease characteristics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

## Advanced Education (ADVE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ADVE D012. Adv Educ P/T Res. 6 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**ADVE D013. Adv Educ P/T Non Res. 6 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**ADVE D020. Summer Clinic I - Res. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.



**ADVE D021. Summer Clinic I - Non-Res. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## Advertising (ADV)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ADV 5501. Advertising Research and Strategy. 3 Credit Hours.**

This course provides an overview of the process for developing and evaluating advertising strategy that is grounded in theoretical principles and supported by research. In particular, the course examines concepts and techniques that are useful for identifying consumer insights and social trends affecting communication strategy in the developmental phase and then measuring the effectiveness of those strategies in the evaluative stage. The course will review best practices in both qualitative and quantitative research techniques including attention to ethical considerations that are fundamental to consumer research. The aim of this course is to provide students with a better understanding of the role of theoretical principals and research in campaign development and evaluation while familiarizing students with the types and methods of research that are used in advertising practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ADV 5502. Media Planning and Analysis. 3 Credit Hours.**

The focus of this course will be on the art and science of crafting a paid presence for large budget brands competing in today's complex media environment. Students explore the conceptual foundations of media planning with an eye towards effectively engaging a target audience, which has more control over media consumption than any prior generation. Coursework will explore how shifts from mass media to personalized content affect the opportunity to place branded messages and how socially active audiences can magnify a message for better or worse through their own personal networks. In-class discussion will explore the future of paid media placement, audience tolerances for ad-supported content and the economic implications of a shift from ad-supported to "free" content.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ADV 5503. Persuasion and the Marketplace. 3 Credit Hours.**

This course explores the strategic use of communication to facilitate change. Theoretical frameworks will be taught and their applications explored. Discussion topics include behavior and attitude change in the contexts of health, social, and consumer behaviors. We will focus on moral and ethical issues in the marketplace as they relate to the fundamentals of persuasion theories. Additional topics for in-class discussion will focus on the moral and legal implications of advertising language, disclosure and transparency in a socially connected world. By the end of the course students will propose a strategic plan that utilizes persuasive theory to change the health, social, or consumer behavior of a hard to reach audience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ADV 5504. Visual Communication and Branding. 3 Credit Hours.**

"Visual branding" isn't just a buzz-phrase; it's a crucial part of every company's marketing strategy. Brand identity fuels recognition, increases differentiation, and symbolizes core values. Identity expresses itself in visual systems that shape audience perception. The course will examine how the disciplined process of branding can build awareness and extend loyalty in an audience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ADV 5505. User Experience Design and Strategy. 3 Credit Hours.**

User Experience Design and Strategy are practices that, when conducted empirically, will help ensure a successful digital experience. UX Design and Strategy seeks continuous customer feedback and validation that the brand or campaign is addressing customers' needs. This course is a combination of contemporary methodologies culled from several disciplines including user research, product design, and business strategy. Topics will include: competitive analysis and identification of marketplace opportunities, value innovation, rapid prototyping, customer discovery, and designing for conversion using metrics. By the conclusion of the course, each student should be equipped with a strategic method to quickly and effectively launch a product or service online. This course introduces the latest techniques for conducting user research, creating personas, and refining and optimizing particular user experiences. Topics include conducting user research, developing user personas and scenarios, information architecture, system and user interface design, prototype creation, and usability testing and analysis. Students develop and present a single comprehensive project for their portfolio that includes usability research and a working prototype.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ADV 5506. Advanced Strategies in SEO and SEM. 3 Credit Hours.**

Search has become an indispensable utility. Search engines are a gateway to the world's collected knowledge and, most important to marketers, their use is a reflex action in response to curiosity. The Internet has rewired our decision process and forever changed how consumers buy. This course will explore what Google has coined the "Zero Moment of Truth", that crucial moment when the consumer researches their options prior to purchase. After completion of this course, students will understand how to evaluate brand positioning via various search engines, the tactics available to improve their visibility and how consumer behavior is continuing to change as search itself evolves.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ADV 9082. Directed Projects. 1 to 8 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ADV 9083. Directed Readings. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Africology and African American Studies (AAAS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**AAAS 5010. Special Topics in African Languages. 3 Credit Hours.**

Languages vary by semester. Please consult with the instructor and/or check the course schedule for specific topic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AAAS 8001. Proseminar in Graduate Work in African American Studies. 3 Credit Hours.**

An introduction to the intellectual and professional foundations of the field. It examines the historical origins of African American Studies in the United States and Africa, as well as the context of classic creative, analytical, and autobiographical works.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8002. African Civilizations. 3 Credit Hours.**

An intensive investigation into the origins of several major African civilizations. Civilizations and periods chosen may vary at the discretion of the instructor but will normally include the classic cultures of Nubia, Kemet, Axum, Songhay, Mali, Ghana, Monomotapa, Yoruba, and Asante.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8003. Research Methods in African American Studies. 3 Credit Hours.**

An introduction to the basic research methods used in African American Studies. It examines historical, anthropological, behavioral, and critical methods, as well as the methodological foundations of the Afrocentric method.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8004. Theories and Methods in African American Studies. 3 Credit Hours.**

An intensive critique of African studies within the context of evolving theoretical and methodological issues. Topics include boundaries of particularism, frames of reference, etymology, historical cleavages, and the idea of the African voice. Students will write major research papers analyzing the various perspectives advanced by scholars within the field of African studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8005. African Literature. 3 Credit Hours.**

Examines African literature from 4000 B.C. to the 20th century. Special attention will be paid to the early sacred works, and didactic oral traditions, poetry, drama, the advent and literary aesthetics of Western-writers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8006. African American Literature. 3 Credit Hours.**

Deals with the social context of African American literary development from enslavement to the present. Students are introduced to the cultural patterns and historical experiences that produced the early autobiographies, narratives, poetry, and essays as well as the 20th century novels, plays, and poetry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8007. African Aesthetics. 3 Credit Hours.**

Examines the interrelationship of the creative process with cultural and philosophical motifs in African history by studying mythology, the generative and productive force of the spoken word and the power and significance of a wide variety of aesthetic concepts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8008. Ethnographic Methods. 3 Credit Hours.**

Examines the various classic and contemporary methods for collecting field data on African cultural and social behaviors. Emphasis on the use of audio and video data gathering methods, and participant observation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8009. The Afrocentric Paradigm. 3 Credit Hours.**

In this intensive critique of African studies we discover the processes by which those working in the discipline of Africology develop their arguments about and/or interpretations of the African world experience transnationally and trans-generationally. Although this course naturally emphasizes theories and methodologies in Africana Studies, our readings and discussions will move beyond the rote acquisition of a list of thinkers and their ideas. Since our main objective is to finish the course with a broader, deeper view of the discipline, our dialogue must intentionally sharpen our skills as critics, theoreticians and researchers, and give us the confidence to examine the agency of African people in any phenomena. Thus, students will explore the historical and intellectual roots of Afrocentricity, as well the main tenets of the most prominent paradigm in the discipline. It is expected, that by the end of the semester, students should be well versed in Afrocentric theories and be able to apply it to their own research interests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8415. Ancient Egyptian Language I. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8416. Ancient Egyptian Language II. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8432. African-American Family. 3 Credit Hours.**

Contemporary theories and research on the African American family. Includes assessment of family behavior, the role of children, sex roles, perceptual changes within the context of society, demographic factors, impact of unemployment and underemployment, and income distribution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8435. Ebonics: African American Language. 3 Credit Hours.**

Examines variations of African American languages found throughout the Americas. Special attention to the Gullah prototype from South Carolina and Georgia. Presents the major theoretical arguments about the development of the languages.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8441. African Philosophical Thought. 3 Credit Hours.**

An analytical and historical overview of the ideas that have made the African culture, with particular emphasis on the resurrection idea, the concept of rule, harmony and balance, divination systems, dual-gender responsibility, and relationship between human beings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8442. African Religions. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8446. Cheikh Anta Diop. 3 Credit Hours.**

A critical examination of the portions of Diop's corpus on the African origin of civilization with special inquiry into the nature of his evidences. Students will present papers analyzing Diop's Afrocentric perspective and his impact on African scholarship around the world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8449. Pan Africanism. 3 Credit Hours.**

A survey of the major currents of Pan African Thought from the early Pan African Congresses to the events of the Sixth Pan African Congress of Dar Es Salaam. Opposing critiques will be presented and discussed, especially the Marxist critique of Pan Africanism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8455. Caribbean Culture and Politics. 3 Credit Hours.**

An investigation of the roles of culture and politics in the development of the Caribbean basin. Particular emphasis will be placed on the ways that African cultural survivals, creolism, syncretism, and political struggle have acted to create the unique Caribbean outlook.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8464. Literature of the Harlem Renaissance. 3 Credit Hours.**

A study of the African-American realization of literary revivals between the two great 20th Century European wars. Special emphasis on Harlem as a venue and symbol of the emergence of modern African American literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8465. Literature of the Black Power Revolution. 3 Credit Hours.**

An overview of the major African American literary developments of the 1960's and 1970's in the United States. Looks at the works of Amiri Baraka, James Baldwin, Sonia Sanchez, Nikki Giovanni, Haki Madhubuti, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8468. Major African Writers. 3 Credit Hours.**

Examines the 20th Century prose, fiction, and poetry, of major writers of the African world. Students analyze writers in accordance with the protocols of literary innovations, Afrocentric motifs, symbolic functionalism and political themes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8521. Readings in African History. 3 Credit Hours.**

Survey of the major developments in Africa through written and oral records with discrete emphasis on the analysis of perspectives both external and internal to Africa. Collected traditions, colonial and neocolonial scholarship, liberal and feminist writings, Marxist and neo-Marxist treatises as well as Africanist and afrocentrist literature will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8542. Readings in African American Social Thought. 3 Credit Hours.**

An intensive reading of the works of Frederick Douglass, Martin Delany, Frances Harper, W.E.B. Du Bois, Marcus Garvey, Edward Blyden, Booker T. Washington, E. Franklin Frazier, Ida B. Wells, Anna Julia Cooper, and others. Looks at the intellectual roots of the ideas of significant contemporary thinkers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8547. Readings in 1960's Protests. 3 Credit Hours.**

Close reading of documentary evidences in African American political, historical, and social thought during the turbulent sixties. Students prepare papers from primary documents.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8561. African American Theatre. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 8566. African American Music. 3 Credit Hours.**

A survey of the rich musical tradition of African Americans from the emergence of the field hollers and work songs to contemporary music. Attention given to spirituals, jazz, blues and rock as major genres.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9001. Seminar in African Aesthetics. 3 Credit Hours.**

Examines the philosophical foundations of African aesthetics by concentrating on the cosmology, ritual religions, oral traditions, and proverbs of African people. Examines the question of what constitutes African standards of beauty, or art, or good, or culture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9002. Teaching African American Studies. 1 to 3 Credit Hour.**

Required of all graduate teaching assistants prior to the assumption of teaching duties. Designed to teach communication and organizational skills. Supervision of teaching is required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9614. African American Diaspora. 3 Credit Hours.**

Using primary source material and with special attention to the United States, students will examine the African experience in the Americas from the 14th century to the present. Movements, periods, events and people that represent the major social, economic and political African American thought will be surveyed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9615. Seminar in African American Psychology. 3 Credit Hours.**

An examination of theory and research pertaining to African American psychology. A selected discussion of various theoretical perspectives on African American personality and socialization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9625. Nile Valley Civilization. 3 Credit Hours.**

A critical examination of selected topics in the civilizations of Kemet, Nubia and Axum. Detailed analysis and discussion on the primacy of Kemet in African civilization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9641. Sem Life & Work Malcom X. 3 Credit Hours.**

Examines the life and work of Malcolm X from the standpoint of his impact on social, political, and economic movements in the United States. The moral force of Malcolm X as seen in the growth of various urban religious and spiritual groups will be assessed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9642. Seminar in African American Social Philosophy. 3 Credit Hours.**

An intensive seminar in the writings and activities of major social philosophers such as Edward Blyden, Ida B. Wells, Paul Cuffee, Martin Delany, David Walker, Malcolm X, Harold Cruse, and Angela Davis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9643. Research and Writings of W.E.B. DuBois. 3 Credit Hours.**

An intensive examination of selected topics in the autobiographical works of Du Bois, historical, sociological, and creative works.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9645. Seminar in the African American Woman. 3 Credit Hours.**

An exhaustive treatment of theories relating to the role of the African American woman. Topics will include gender bias within the African American community, feminism and the black woman, sexism, classism, and racism, and the future of the black woman in America.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9662. Seminar in the African American Novel. 3 Credit Hours.**

A seminar in the African American novel which may focus on one or several principal figures or examine a single theme during a particular historical period, i.e., the novel after 1945.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9761. Seminar in African American Studies: Social Behavior. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**AAAS 9982. Individual Research in African American Studies. 1 to 6 Credit Hour.**

Individual Research In African American Studies while still in the coursework phase of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AAAS 9993. Master's Comprehensive Examination. 1 to 6 Credit Hour.**

Preparation for master's comprehensive exam.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AAAS 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Preliminary Exam Preparation. Following coursework completion, registration in AAS 9994 is required to prepare for Preliminary Exams.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AAAS 9996. Master's Thesis. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AAAS 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Pre-Dissertation Research. After having passed the Preliminary exams, registration is appropriate for students working on the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**AAAS 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is intended only for those students who have achieved Ph.D. Candidacy status. A minimum of 6 semester hours is required for graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## **Anatomy & Cell Biology (Medical School) (ANAT)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ANAT M495. Teaching Assistant - Fundamentals I: Human Structure. 0 Credit Hours.**

This elective is designed to allow students to serve as teaching assistants in block 1, Teaching Assistant - Fundamentals I: Human Structure. Students will be expected to assist in cadaver dissection (lab sessions), facilitate peer teaching (cross-teach sessions) and participate in flipped classroom, small group conferences where anatomical knowledge is applied in case-based presentations. Students will also have the opportunity to prospect selected regions of the body under faculty supervision to prepare for teaching sessions and to increase their knowledge of relevant anatomic structure.

**Repeatability:** This course may not be repeated for additional credits.

**ANAT M630. Eat to Live Not Live to Eat. 0 Credit Hours.**

This elective will have five teaching venues: (1) hands-on counseling of patients, (2) online learning at <http://www.nutritioninmedicine.org/portal/>, (3) case study discussions, (4) student presentations, (5) cooking to appreciate cultural and socioeconomic diversity.

**Repeatability:** This course may not be repeated for additional credits.

**ANAT M832. Advanced Clinical Anatomy Elective. 0 Credit Hours.**

This elective will be advantageous for individuals interested in various clinical specialties/subspecialties, including (but not limited to) internal medicine, radiology, surgery, pediatrics, obstetrics and gynecology, urology, gastroenterology, cardiology, oncology, pathology, otolaryngology, orthopaedics and emergency medicine.

**Course Attributes:** M2

**Repeatability:** This course may be repeated for additional credit.

## Anesthesiology (ANES)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ANES M294. Intro to Anesthesiology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**ANES M310. Career Exploration of Anesthesiology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**ANES M400. Vacation. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**ANES M410. Anesthesiology. 0 Credit Hours.**

**Course Attributes:** M2

**ANES M415. Pain Management. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**ANES M425. Advanced Anesthesia. 0 Credit Hours.**

The student will be given access to more advanced areas of anesthesia practice not available in the basic rotation. This will also involve experiencing being on-call.

**Repeatability:** This course may be repeated for additional credit.

## Anthropology (ANTH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ANTH 5006. Quantitative Analysis of Anthropological Data. 3 Credit Hours.**

The primary goal of this course is to provide students with a solid grounding in basic statistical techniques/methods as applied to anthropological data.

Such data is highly variable in form due, in part, to the diversity of research questions being asked and to the methods of collection. The ultimate goal of this course is to bring together various data sets and methods so that students might better assess the results/interpretations presented in the anthropological literature. New quantitative concepts will be presented each week along with examples/applications of the concepts and practice problems. The problems associated with the main course text will be solved using a hand calculator; more complex data sets and problems will require the use of computer statistical software [i.e., SPSS (available on all University machines)].

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**ANTH 5170. Methods in Archaeology. 3 Credit Hours.**

Methods and procedures used in the practice of archaeology with topical foci varying by semester. Semester long topics include: cultural resource management; sediments, soils, and geomorphology in archaeology; pottery analysis; and lithic analysis. As an example, the lithic analysis focus provides hands-on experience in analyzing lithic assemblages through experimental replication of stone tools, experimental use of stone tools, microscopic analysis of experimental and archaeological specimens, and classification of lithic assemblages. The first half of the course consists of laboratory exercises in making, using, and analyzing stone tools and flaking debris. The second half of the course is devoted to the conducting of independent research projects by class members on some aspect of lithic analysis. Because topics change, 5170 may be taken more than once.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 5171. Comparative Early Civilizations. 3 Credit Hours.**

This comparative analysis of the rise of early civilizations uses archaeological and historical information to examine the development of ancient societies. It focuses on problems of the Neolithic revolution and the autochthonous transformation of kin-based communities into stratified societies and the subsequent formation and development of archaic states.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5172. Seminar in Northeastern Prehistory. 3 Credit Hours.**

The archaeology and prehistory of the native peoples of the Middle Atlantic Region are examined in detail, and in the broader context of cultural developments in the Northeast and Eastern Woodlands of the United States. Although the seminar employs cultural historical periods as a way to present information, cultural diversity across time and space are emphasized. Basic descriptive data dealing with prehistoric cultures are presented, as well as the variety of interpretations of native lifeways upon which they are based. Included in the course is information derived from cultural resource management studies, the results of which are infrequently published.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5177. Approaches to Historic Sites in Archaeology. 3 Credit Hours.**

Students examine the central questions, values, and goals of historical archaeology, gaining a working knowledge of its basic concepts and methods. A material culture approach is used as archaeological objects are presented in sites where they express a series of concepts related to our understanding of status, wealth, self identity, consumerism, and symbolism. A holistic framework is used to present material evidence together with documentary, oral, and other data. A variety of sites will be examined in order to introduce many important subfields of historical archaeology such as landscape archaeology, urban archaeology, industrial archaeology, and underwater archaeology. The course also will demonstrate how such evidence illuminates the modern world and its relevance to our own time and place.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5180. Historic Sites in Archaeology. 3 Credit Hours.**

A seminar on the archaeology of sites dating from the colonial period and later periods in American history. Topical focus varies; contact the instructor for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 5189. Field Session in Archaeology. 6 Credit Hours.**

Techniques and concepts of field archaeology, including survey and excavation. Students will be expected to spend the greatest part of the session in the field during the excavation of a prehistoric or historic occupation site. The location of field projects shifts from year to year. Previous locations have included coastal Maryland, the New Jersey Pine Barrens, the Middle and Upper Delaware Valley, and Valley Forge.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 5310. Theories and Methods in Cultural Anthropology. 3 Credit Hours.**

This course examines anthropological approaches to visual and material consumption in social life. Through readings in both classic social theory and contemporary theory and ethnography, we will investigate how images and things acquire meaning, organize social life, and constitute identities through different consumptive processes. Questions to be addressed include: How do people create social identities, hierarchies, or senses of collective belonging through consumption practices? How do images and objects acquire value or significance in different consumption contexts - from gift exchange to internet surfing to shopping? What is the relationship between images, objects, money, and morality in different societies? How can we understand the commodity form ethnographically? What can consumption reveal about processes of state formation and globalization - from the creation of imagined communities to the creation of inequalities? What are the differences between the consumption of visual media versus material objects?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 5322. Anthropology and Development. 3 Credit Hours.**

Economic Anthropology is the study of how economic systems articulate with culture on a variety of scales. This class examines basic paradigms of study in economic anthropology, theories of money and value, and ethnographies of exchange. We will look at how the commodification, production and/or sale of goods in formal, informal and black markets affect people in very different ways. We think through the role of the state, of religion, power struggles and advertising in shaping these markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5325. Culture, History, and Power. 3 Credit Hours.**

This course examines how both western and non-western societies have defined the domain of "politics." While looking at a range of ethnographies on different forms of politics, we will also attempt to understand how anthropologists historically have studied politics, and how anthropological notions of politics have changed through time.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5326. Problems in the Anthropological Study of Religion. 3 Credit Hours.**

This course examines some of the major themes, methods, and intellectual traditions of the study of religion in anthropology. Considered as a comparative study of religious practice, this course seeks to understand thought and behavior in worship, iconography, pilgrimage, domestic and congregational performance, mythology and cosmology, trance, dance, sacrifice, ritual experience and other dimensions of religious life as well as the way that these facets of religious culture interrelate. The study of religion in a historically complex circumstance will provide the means to examine the processes of accommodation and tension that exist in a multi-religious environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5328. Seminar in Social Organization. 3 Credit Hours.**

This seminar focuses on anthropological analysis of social structures, including kinship, families and households, social networks, voluntary organizations, and bureaucracies

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5332. Medical Anthropology. 3 Credit Hours.**

Examines biocultural and sociocultural approaches to the understanding of multiplex human experiences of health, disease, and affliction. Introduction to the major theoretical schools and critical issues of contemporary medical anthropology. Explores six topical areas: biocultural perspectives on disease and health; ethnomedicine; medical pluralism; medicine and social control; international health development; and the relationships between culture/society and scientific biomedical representations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5335. Anthropology and Social Policy. 3 Credit Hours.**

Examines "applied" domain and different ways of "using" anthropological knowledge, ranging from critiques of international and federal social policies as products of the state and private interests to participative anthropology that moves toward political action and empowerment, to working for the state and private corporate centers as a way to make a living. Evaluates the efficacy of different types of work for progressive social change and examines the possibilities of how to make our research matter more in relation to major public issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5355. Anthropology of Sexuality and Gender. 3 Credit Hours.**

Explores anthropological literature on gender as a means of exposing the hidden assumptions about power, language, and gender that inform anthropological theory. Theoretical critiques of this literature will be used to reassess anthropology and to generate a systematic approach to the study of gender. (Prior to fall 2015, the course title was Gender Theory.)

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5358. Race and Class in North America. 3 Credit Hours.**

American Culture: Conformity and Diversity. This course focuses on North American ethnographies and their role in the development of North Americanist anthropology. This includes examining dominant debates about the cultural and structural intersection of race, class, gender, and other axes of difference. Other topics include the global spread of North American power, expertise in science and technology, and cultural forms in the twentieth century.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5366. Contemporary Perspectives in Urban Anthropology. 3 Credit Hours.**

Examines the development of urban anthropology from the early debates of the 1970s to redefinitions in the 1980s. The emerging paradigm of intensive studies of local social processes within larger macrostructural contexts is the focus.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5389. Fieldwork in Ethnography. 3 Credit Hours.**

This class encourages students to explore the world around them from an ethnographer's perspective; that is, to observe, hear and listen to people and the settings around them with attention to history and the social, political, economic, and ideological structures that provide the context for actors' agency. We will conduct short fieldwork exercises, write fieldnotes and an analytic paper, and conduct an oral history interview. We will also consider what ethical issues fieldworkers encounter as they pursue their research, read classic and more recent examples of ethnographic writing, and engage in debate about different forms of anthropological methods and writing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5396. History of Anthropological Theory. 3 Credit Hours.**

Clarifies various intellectual currents in contemporary anthropology, their relationships to intellectual and social developments, and debates in the broader society. Concerned with the development of anthropological thought as it has been shaped by Western society and the emergence of various intellectual tendencies. Surveys the antecedents of anthropology in the major intellectual currents of the early modern era and its crystallization during the Age of Revolution. Focuses in detail on what happened after the social sciences were professionalized in the late 19th century.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5428. Theory and Methods in Culture and Communication. 3 Credit Hours.**

This course explores the history and development of visual culture. Considered are: the history of perception and how mechanical and digital reproduction have had an impact on the sensuousness of the gaze-in-culture; how various intellectual movements in the 20th century effected visual reproduction. The course provides a solid historical foundation with which students can enhance their comprehension of contemporary visual culture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5434. Anthropology in Feature Films. 3 Credit Hours.**

Students will critically review a series of feature films that include topics, themes, and subject matter often treated within anthropology and related human sciences. It is clear that American feature films usually thought of as 'Hollywood films' can be very influential in establishing or reinforcing social and cultural stereotypes of 'states of knowledge' about peoples living in various parts of the world. Viewership of these materials, either as films shown in movie theaters or as their videotape counterparts seen on home television screens, certainly exceeds the size of audiences in introductory anthropology courses in the U.S. The potential for influence and false senses of familiarity is enormous.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5438. Anthropology of Mass Media. 3 Credit Hours.**

This course examines the relationships between various types of media (film, radio, television, Internet, newspaper, telephone, performance) and power relations, control, and cultural representation. We will look at reception studies, and social construction of "news watching," the construction of "others" and the maintenance of "otherness" in media, as well as the international politics of media messages and the power of media in influencing our opinions about the world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5439. Anthropology and Photography. 3 Credit Hours.**

A critical examination of an anthropological approach to photography. Special attention will be given to a socio-cultural history of photography in the U.S. Examples from documentary, fine art, and commercial photographic genres will be shown, discussed, and compared to ethnographic studies. Field methods, models of analysis, and ethical issues will also be included. Required readings, active class participation. No exams. Students keep a journal and write several short essays. Note: Knowledge of camera technology and darkroom procedures is helpful but not required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5444. Anthropological Problems in Visual Production. 3 Credit Hours.**

The introduction of visual recording techniques to a sample of problems in the anthropology of visual communication. Discussions will include ways anthropologists construct problems, develop observational strategies, select appropriate image-making technology, work in field conditions, among others. Strategies of representation connected to the integration of cultural and film theories will be explored in conjunction with a wide range of film examples. Students will be introduced to the department's production facilities and do short exercises in image making, viewing, and interpretation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5458. Anthropology of Public Culture. 3 Credit Hours.**

Explores museums, exhibitions, galleries, and festivals as a form of public culture. Activities include critical reading of relevant literature and an examination of films, CD-ROM's, Internet web sites as well as field trips to local institutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5501. Language, Power, and Agency. 3 Credit Hours.**

This seminar examines the varied ways in which individuals and groups use language in constituting, maintaining, resisting, challenging, subverting, and transforming power relations. These issues are considered at multiple levels of analysis, from face-to-face interactions to performances to the production and circulation of media at national and global levels. A central goal is to develop critical perspectives on the place of language and communicative practice in contemporary social theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5504. Language as Social Action. 3 Credit Hours.**

This seminar examines language use and other communicative practices as forms of action through which individuals and groups create, sustain, and transform their lifeworlds. Drawing largely on ethnographic materials, it considers a broad range of the semiotically, culturally, politically, ideologically, and discursively mediated activities that, taken together, constitute human sociality. The seminar emphasizes the collection, analysis, and presentation of original ethnographic data. Toward these ends, each seminar participant develops an independent research project involving participant observation and naturalistic audio-video recording of communicative practices (both verbal and non-verbal) in local settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5509. Language Socialization and Cultural Reproduction. 3 Credit Hours.**

Language socialization research is concerned with the processes whereby children and other novices, through interactions with older or otherwise more experienced persons, acquire the knowledge, orientations, skills, and practices that enable them to function as (and crucially, to be regarded as) competent members of their communities. This seminar examines language socialization and cultural reproduction as both universal and culturally specific phenomena. Topics explored include theoretical and methodological approaches to socialization; cross-cultural variations in ways of teaching and learning; socialization of children and of other novices; the agency of learners; the socialization of identities, roles, and statuses; and socialization processes as a site of innovation and change. Using the resources of the Linguistic Anthropology Teaching Laboratory, seminar participants collect, analyze, and present ethnographic audio-video data from various local settings (schools, churches, community organizations, workplaces, etc.) in which socialization can be observed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5510. Methods in Linguistic Anthropology. 3 Credit Hours.**

Survey of methods and problems in linguistic anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 5770. Methods in Physical Anthropology. 3 Credit Hours.**

Methodological training for graduate students in physical anthropology and the Biocultural adaptation program. Topics include population genetics and demography, osteology, energy flow models, and human physiology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 5796. Biocultural Adaptation of Human Populations. 3 Credit Hours.**

This course explores the manner in which the adaptation concept has been used in cultural and biological anthropology. Evaluations of optimization models, thermodynamic models, evolutionary stable strategy theory, cultural materialism and selection models are conducted in a seminar format. Discussions will focus on the extent to which the behavioral and biological characteristics of human populations can be explained in an "adaptive" context. Students will critique specific models and the way they have been applied to groups living in stressful environments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5797. Reproductive Biology of Human Populations. 3 Credit Hours.**

A survey of physiological and biochemical variability in human populations examined as a function of environmental adaptation. Emphasis on the responses of different populations to discernible environmental stresses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 5798. Seminar in Evolutionary Biology. 3 Credit Hours.**

In-depth review of the synthetic theory of evolution, and special topics in evolutionary theory. Emphasis placed on the history of evolutionary thinking, the sources of variation in human populations, evolutionary processes, behavioral ecology, the levels of selection and problems in phylogenetic reconstruction. Anthropologically relevant models will be used throughout the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8001. Mobility and Global Inequality. 3 Credit Hours.**

Mobility and inequality endure as fundamental realities of human life, and underlie myriad social processes and institutions through which, on the one hand, people organize and make sense of the world around them and, on the other hand, seek to change the conditions and circumstances of their lives. They are at once complementary and oppositional, and examining some of the dynamics between them provides perspective into a variety of anthropological questions both old and new: how do people negotiate unevenly distributed resources? why do people move to new places? in what circumstances is social egalitarianism possible, and in which do hierarchy or even tyranny prevail? as people move, what is lost and what is retained? what effects will large-scale human migration have on prevailing political and economic systems? is radical social change possible under capitalism? Such questions lead us inevitably towards the problem of power and governance, both in today's world and the series of regimes and orders that have preceded and shaped it. How and why people move, or are forced to move, is always bound up with projects of control, exploitation, rebellion, oppression, allegiance, and resistance. This course focuses on mobility and inequality as grounded, embodied processes and experiences, by focusing on ethnographic descriptions of people who are both stuck and on the move, subjugated and liberated, in order to introduce students to a range of foundational concepts and questions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8002. Evolution, Human Environments, and the Culture Niche. 3 Credit Hours.**

Contemporary research in anthropology has become increasingly interdisciplinary and integrative across the 4 traditional subfields. This reflects both expanded theory and emerging themes of inquiry. One important perspective on the human condition is to recall our evolutionary history and the unusual, biologically-based capacity of humans to create our own socioecological niche. The expansion of evolutionary theory in recent years to embrace the importance and relevance of niche construction is a central question in the discipline. This course begins by examining the paleontological and primatological evidence for human uniqueness, particularly the capacity for language and the importance of social learning. Then, through the lens of Evolutionary Biology we introduce, critique and consider the value of an adaptationist perspective to explain Culture. Anthropology has long appealed to the concept of bio-cultural evolution and to the idea that Culture is an adaptation (in the evolutionary sense of the word). This course builds on that history to explore the nature, impact and importance of the culture niche. Several influential approaches to understanding variation in cultural practices and human behaviors are compared: Optimality Theory, Human Behavioral Ecology, Evolutionary Ethnobiology, Cultural Ecology, Dual-Inheritance Theory. The course concludes with a series of Case Studies and consideration of the Culture Niche concept in Applied Anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8003. Approaches in Cultural Anthropology. 3 Credit Hours.**

Examination of the major theoretical debates that have informed cultural anthropology by analyzing how these perspectives have shaped the development of the ethnographic form. Topics include: structural-functionalism, professional and symbolic approaches, political economy, gender theory and post-structuralism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8004. Approaches in Linguistic Anthropology. 3 Credit Hours.**

Linguistic anthropology is concerned with the dynamic inter-relationships among language, culture, and society. This course provides an overview of theoretical and methodological approaches through which language can be studied in its social and cultural contexts as a means of communication as well as a medium of power, a means of production, and a commodity of value. Language is regarded as a cultural resource, and communicative practices are treated as forms of social action that vary significantly from one place and time to another. The role of language in sociocultural processes of reproduction and change are examined, revealing that communicative practices and their social organization are not just reflections of pre-existing social structures and cultural patterns, but are in fact constitutive of society and culture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8005. Approaches in Physical Anthropology. 3 Credit Hours.**

Survey of theories and methodologies used in physical anthropology. Development of physical anthropological theory and practice, genetics, hominid evolution, human population variation, primate history and ethnology, ecology, demography, and physiological anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8006. Approaches in Archaeology. 3 Credit Hours.**

Examines the methods and theories used in archaeological research and provides an overview of human history that has been revealed by archaeological research. Topics covered include the historical development of archaeology, the nature of archaeological evidence, measuring and organizing time, analyzing spatial relationships, interpreting material culture, explanations in archaeology, hunter-gatherers in prehistory, agricultural origins, origins of complex societies, historical archaeology, and current trends in archaeology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8011. Teaching of Anthropology. 3 Credit Hours.**

This course is a workshop on issues in the teaching of anthropology in general and, more specifically, on the teaching of introductory courses in Temple's Department of Anthropology. Weekly meetings will cover general pedagogical issues such as writing a syllabus, evaluating student writing, constructing class assignments, grading and similar matters. Sample syllabi will be collected and reviewed, along with the textbooks that have been used for various introductory classes. Students will interview those who have experience in teaching introductory courses and will create a syllabus of their own for a course relevant to their individual subfield in anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8012. Ethical Considerations in Anthropology Research. 3 Credit Hours.**

This course is designed to introduce graduate students to a large variety of ethical considerations in the field of Anthropology. Because anthropologists work with various aspects of the study of humankind, significant time must be taken to protect all aspects of research including living people, deceased people, descendant communities, model animals, and representations of people, language, and material aspects of culture. This course will challenge graduate students to consider difficult circumstances in anthropological research and encourage them to develop personal, peer group, and professional understandings of their responsibilities as anthropology researchers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8110. Problems in Archaeology. 3 Credit Hours.**

Consideration of special theoretical and methodological problems in archaeology. Topical and area emphasis varies by semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 8310. Problems in Socio-Cultural Anthropology. 3 Credit Hours.**

A seminar oriented to specific research issues. Topics vary from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 8315. Writing for Anthropologists. 3 Credit Hours.**

Reading and analysis of key ethnographic texts. Major topics include: development of ethnography as a genre in the twentieth century; regional patterns in ethnographic data and their relation to theory formation; postmodern critiques of ethnography; the influence of ethnography on other disciplines; and the use of ethnographies in teaching anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8320. Problems in Ethnology. 3 Credit Hours.**

Reading and analysis of key ethnographic texts. Major topics include: development of ethnography as a genre in the 20th-century; regional patterns in ethnographic data and their relation to theory formation; postmodern critiques of ethnography; the influence of ethnography on other disciplines; and the use of ethnographics in teaching anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 8330. Funding and Grant Writing in Anthropology. 3 Credit Hours.**

A seminar in research design and grant writing for graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 8340. Advanced Seminar in Social Anthropology. 3 Credit Hours.**

Oriented to specific research issues. Topics vary by semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 8344. Seminar in Expressive Culture. 3 Credit Hours.**

This course explores the major anthropological approaches to the relationship between objects and social life, with a particular focus on art as especially illuminating. Using examples from Africa, the Middle East, Oceania, Europe, and the United States, the following themes are analyzed: how and why are objects categorized (e.g., as art objects, ritual objects, or ethnographic objects); the debate over the cross-cultural applicability of "art" and "aesthetics"; the ideologies of the "artist" in different societies; the ways that different objects are used to define groups of people (e.g., according to clan, race, gender, class, nationality); the relationship between the exchange/circulation of objects and social relations between different groups; the commoditization of objects; the international trade in tourist objects and art; and the role of museums and anthropologists in representing cultures through objects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8366. Violence: An Anthropological Approach. 3 Credit Hours.**

In this course, we will develop an anthropological approach to violence, querying the experience of violence and the ways in which it is generative and destructive of social structures and cultural meaning. We will consider violence's relationship to morality, politics, and inequality, as well as the ways in which violence is affirmed or denied as part of collective experience. Throughout the semester, our work will be grounded in political and anthropological theory and ethnographic material from the United States and elsewhere, as well as students' independent research and analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8408. Approaches in the Anthropology of Visual Communication I. 3 Credit Hours.**

The course has a survey approach; the theoretical overview is grounded in a perspective that applies concepts of culture to processes of visual communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8409. Approaches in the Anthropology of Visual Communication II. 3 Credit Hours.**

Examination of an anthropological approach to the study of the uses of the body, space, and the built environment, film, photographic, and television theories of construction and reception, art and aesthetics, cyberspace, and museums.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8429. Problems in the Anthropology of Visual Communication. 3 Credit Hours.**

Advanced seminar devoted to problematic aspects of visual media, research, fieldwork, production, exposition of issues central to relationships of anthropology, media, and visual communication. Topics vary by semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ANTH 8435. Seminar in Visual Anthropology and the Arts. 3 Credit Hours.**

A seminar oriented to specific research issues, with topics varying from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**ANTH 8550. Current Issues in Linguistic Anthropology. 3 Credit Hours.**

A themed seminar devoted to key areas of contemporary research in linguistic anthropology and allied fields of study. The seminar theme varies according to the instructor's areas of expertise, students' areas of interest, and curricular needs. Contact the instructor for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 9082. Independent Study. 1 to 12 Credit Hour.**

Special study on a particular aspect of anthropology under the supervision of an appropriate faculty member. No more than six semester hours can be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 9982. Independent Study. 1 to 12 Credit Hour.**

Specialized study and research under the supervision of a faculty member while in the coursework phase of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Registration required each semester while preparing for the Preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 9996. Master's Essay. 1 to 12 Credit Hour.**

Students who are doing research and writing for their M.A. thesis should register for this class. Credit does not count toward either the 24 s.h. requirement for MA or the 48 s.h. requirement for the Ph.D.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Intended for students who have completed their qualifying and comprehensive exams and are preparing the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ANTH 9999. Dissertation Research. 1 to 6 Credit Hour.**

Only students elevated to candidacy and writing the dissertation should register for this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Applied Behavior Analysis (ABA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ABA 5302. Effective Teaching Strategies and Academic Interventions. 3 Credit Hours.**

This course overviews assessment and intervention strategies for learners with skill deficits. Learners with a diverse set of needs will be discussed in the course (e.g., neurotypical, autism, intellectual disability, emotional and behavioral disturbance, among others). The link between assessment and intervention will be emphasized throughout the course, with attention to effective practices for learners with diverse needs. Students enrolled in the course will learn how to select, administer, score, interpret, and report results for a variety of behavioral assessment methods that will be related to selecting interventions, monitoring student progress, and making decisions based upon data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 5303. Ethical and Legal Issues. 3 Credit Hours.**

This course is designed to introduce students to the ethical codes relevant to their discipline for students studying ABA (Behavior Analyst Certification Board Professional and Ethical Compliance Code), School Psychology (American Psychological Association Ethical Principles of Psychologists and Code of Conduct; National Association of School Psychologists Principles for Professional Ethics), and Counseling (American Psychological Association Ethical Principles of Psychologists and Code of Conduct; American Counseling Association Code of Ethics). Students will explore common ethical and legal issues such as boundaries of competence, multiple relationships, confidentiality, research, client/student rights, effective treatment, etc. Students will begin to develop a professional decision making framework for resolving ethical conflicts around such issues. Students will also become conversant with current legislation and regulations relevant to their practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 5304. Concepts and Principles of Behavior Analysis. 3 Credit Hours.**

This course provides the student with an introduction to the concepts and principles of behavior analysis. Core concepts including motivation, reinforcement, punishment, extinction, and rule governed and verbal behavior will be covered, along with examples of behavior change techniques that employ these concepts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 5305. Single Subject Research Design. 3 Credit Hours.**

This course provides an overview of strategies for designing and conducting single-subject research in special education. Competencies include selection of independent and dependent variables for research, measurement tactics, research design, establishing generality of results, and ensuring the integrity of research procedures. The methods discussed are not specific to any disability or age level; rather, they are a general set of methods for conducting and interpreting single-subject research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 5306. Organizational Behavior Management - OBM. 3 Credit Hours.**

This course is an introduction to Organizational Behavior Management, a rapidly growing field that applies the principles, methods, and empirical generalizations of Behavior Analysis to improving human performance in organizations. Working from a theoretical basis, students will learn how to diagnose performance discrepancies in organizational settings, design and evaluate appropriate behavior-based solutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 5307. Experimental Analysis of Behavior - EAB. 3 Credit Hours.**

This course will review basic research (animal research and human operant research) in learning and behavior analysis. Students will become familiar with the basic principles of learning and behavior analysis by reading and discussing original laboratory research that lead to basic learning theories.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 5676. Applied Behavior Analysis. 3 Credit Hours.**

Introduction to the functional analysis of behavior of children in the school setting. Includes behavior theory, assessment, interaction, and evaluation. A behavior-change program is conducted.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 8787. Seminar on Verbal Behavior. 3 Credit Hours.**

Advanced course in applied behavior analysis with an emphasis on verbal behavior. Designed to provide students with an overview of verbal behavior (as defined in the field of applied behavior analysis) and an overview of its practical application in teaching language to children with diagnosed language delays.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ABA 9387. Practicum in Applied Behavior Analysis. 3 to 9 Credit Hours.**

This course is one of two required 150-hour practica within the ABA Program (6 course credits total). The goals of the practica are to: 1) Broaden your range of competencies in the field of ABA in real-life settings under the tutelage of seasoned ABA clinical or research supervisors. The range of competencies upon which you will be evaluated by your site supervisor (not this instructor) can be found at the online ABA Practicum Evaluation link: <https://education.temple.edu/aba/practicum-student-evaluation>; 2) Use practical experience to develop 3 research questions for possible exploration for your Master's Research Project, submitted through Canvas; 3) Develop ABA written presentation skills through a case presentation, submitted through Canvas; 4) Complete short discussion board assignments; 5) Build networks for future employment in our field. To this end students are encouraged to complete their practica in settings other than those in which they are presently employed. Students petitioning for an exception should first consult their advisor to provide a rationale for the exception, complete the exception form located in the master's program handbook, and then provide a plan to ensure that the practica experiences will be distinguished from their compensated duties.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ABA 9991. Applied Research Experience. 3 Credit Hours.**

This course is designed to aid students in the M.S.Ed. in Applied Behavior Analysis and other similar research-oriented programs to complete an applied research project. Students will select a research project and participate in supervised research activities including some or all of the following: developing a research question, conducting a literature review, designing a research study, conducting research sessions, developing and/or following a research protocol, collecting and/or analyzing data, reporting research results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Architecture (ARCH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ARCH 5011. Graduate Representation Intensive 1. 3 Credit Hours.**

This course focuses on the development of visual literacy, graphic techniques, and 3D formal exploration. Through projects supported by research, graphically-based exercises, and formal investigations, students will be exposed to the process of representation in architecture. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5012. Graduate Representation Intensive 2. 3 Credit Hours.**

This course focuses on the development of visual literacy, graphical techniques, and 3D formal exploration. Through projects supported by research, graphically-based exercises, and formal investigations, students will be exposed to the process of representation in architecture. Methods of 2D and 3D analog and digital representation will be addressed. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5013. Facilities for Health Workshop 1. 3 Credit Hours.**

The workshop uses interdisciplinary and collaborative approaches to address innovation in health design and facilities. The workshop focuses on human factors and dimensions, habits, and motions of the human body and human bodies as the initiator of design. As such, the workshop looks at issues such as movement, tactility, human engagement, mobility, and related factors as they relate to space and organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5014. Facilities for Health Workshop 2. 3 Credit Hours.**

The workshop uses interdisciplinary and collaborative approaches to promote innovation in health design and facilities. The workshop focuses on the spatial and procedural functions of healthcare facilities. As such, the workshop explores relationships between small and large user-groups, equipment, and various architectural configurations within healthcare facilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ARCH 5013.

**ARCH 5015. Facilities for the Arts Workshop 1. 3 Credit Hours.**

The workshop uses interdisciplinary and collaborative approaches to address innovation in arts facilities design and planning. The workshop focuses on human factors and dimensions, habits, and motions of the human body and human bodies as the initiator of design. As such, the workshop looks at issues such as movement, tactility, human engagement, mobility, and related factors as they relate to space and organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5016. Facilities for the Arts Workshop 2. 3 Credit Hours.**

The workshop uses interdisciplinary and collaborative approaches to address innovation in arts facilities design and planning. The workshop focuses on the spatial and procedural functions of arts facilities. As such, the workshop explores relationships between small and large user-groups, equipment, and various architectural configurations within arts facilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ARCH 5015.

**ARCH 5017. Facilities Workshop 1. 3 Credit Hours.**

The workshop uses interdisciplinary and collaborative approaches to address innovation in facilities design and planning. The workshop focuses on human factors and dimensions, habits, and motions of the human body and human bodies as the initiator of design. As such, the workshop looks at issues such as movement, tactility, human engagement, mobility, and related factors as they relate to space and organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5018. Facilities Workshop 2. 3 Credit Hours.**

The workshop uses interdisciplinary and collaborative approaches to address innovation in facilities design and planning. The workshop focuses on the spatial and procedural functions of facilities. As such, the workshop explores relationships between small and large user-groups, equipment, and various architectural configurations within facilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ARCH 5017.

**ARCH 5033. Project Planning and Programming. 3 Credit Hours.**

A course covering the general processes related to the planning, programming, design, construction and occupancy of facilities, including long range, strategic and tactical planning, the relationship between facility planning and business planning, organization of sites, buildings and interiors. Also covered are specific tools and techniques for these functions, including design and construction documentation and contracts, facility inventories, space planning and relocation management, construction and installation specifications, value engineering, post-occupancy evaluation, contract management and cost estimating techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5096. Health Facilities Practice and Management. 3 Credit Hours.**

The course exposes students to the history, development and current status of the health facilities management profession and develops understandings of the trends and dynamics of contemporary health facilities management practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ARCH 5131.

**ARCH 5122. Graduate Design Foundation Intensive. 6 Credit Hours.**

Students in this course will develop rigorous design thinking through making and the integration of material, craft, tectonic and visual practice. Development of the design crit plus methods of communicating design objectives. Scale: artifact, body and spatial envelope. Development of individual portfolio of design and graphic work as required for the M Arch degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5131. Form and Function in Health and Environments. 3 Credit Hours.**

The course examines the relationship of form, space, and function in healthcare facilities and environments. Using case studies of current facilities, the course looks at the role of design and particular needs for healthcare. The course examines the role of an interdisciplinary approach, where health experts, facilities and design experts, and other related professionals work together to develop state of the art healthcare facilities and environments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5132. Current Topics in Health Facilities Planning and Design. 1 Credit Hour.**

The course examines trends and best practices in health facilities planning and design. Industry experts will present and discuss their work and share relevant case studies of leading projects in healthcare design and facilities. Topics include design processes and solutions, integrated strategic planning, client and community relationships, long-term projections for facilities, and post-occupancy evaluation. Note: This course may be taken up to three times provided that there is a different instructor each time. For further information, check with your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**ARCH 5133. Current Topics in Healthy Communities and Design. 1 Credit Hour.**

The course examines the role of design for human well-being, including physical, mental, and social health. Industry experts will present and discuss their work and share relevant case studies that explore the challenges, opportunities and successful strategies to create communities that encourage healthy practices. Topics include healthy buildings; social equity; healthy transportation networks; innovative urban design; active communities and public space; food access; high performance affordable housing; air quality; secure communities; and mobility and accessibility. Note: This course may be taken up to three times provided that there is a different instructor each time. For further information, check with your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**ARCH 5134. Current Topics in Resilience and Design. 1 Credit Hour.**

The course examines trends and best practices in how to design buildings, plan communities, and construct infrastructure that persist and thrive amid predicted and unforeseen disruptions. Industry experts will present and discuss their work and share relevant case studies in the purposeful design of buildings, communities, and regions capable of maintaining livable conditions when faced with an interruption of normal services. Topics include adaptation to a wide range of impacts as a result of climate change, such as increased intensity of storms, higher precipitation, coastal and inland flooding, increased severity of droughts, wildfires, warming temperatures, power outages, and thawing permafrost. Note: This course may be taken up to three times provided that there is a different instructor each time. For further information, check with your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**Course Attributes:** SI

**ARCH 5135. Current Topics in Energy and Performance. 1 Credit Hour.**

The course examines innovative practices used to predict and measure energy usage in buildings. Industry experts will present and discuss their work and share relevant case studies that explore the challenges, opportunities and successful strategies to design energy efficient, high performance buildings. Topics include energy modeling and simulations; energy-efficient building operations; energy-related problems in buildings; and metrics of energy flows in buildings. Note: This course may be taken up to three times provided that there is a different instructor each time. For further information, check with your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**ARCH 5136. Current Topics in Fabrication and Making. 1 Credit Hour.**

The course examines innovative design and fabrication techniques. Industry experts will present and discuss their work and share relevant case studies that explore tools, processes, and techniques by which products, components, and buildings are made. Topics include digital and analog fabrication; robotics; prefabrication; prototyping; and mass production. Note: This course may be taken up to three times provided that there is a different instructor each time. For further information, check with your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**ARCH 5137. Current Topics in Visualization. 1 Credit Hour.**

The course examines innovative practices used for the visualization, representation, and documentation of objects, buildings, and environments. Industry experts will present and discuss their work and share examples of the current tools and techniques. Topics include still image production such as rendering and collage; building information modeling; augmented and virtual reality; and animation. Note: This course may be taken up to three times provided that there is a different instructor each time. For further information, check with your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**ARCH 5138. Current Topics in Materials and Design. 1 Credit Hour.**

The course examines innovative materials and their applications and use in design. Industry experts will present and discuss their work and share relevant case studies. Topics will address a range of issues related to sustainable and advanced materials include traditional and novel materials and uses; responsive materials; smart materials; haptic technologies; manufacturing innovations. Note: This course may be taken up to three times provided that there is a different instructor each time. For further information, check with your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Art Architecture, Tyler School.

**Course Attributes:** SI

**ARCH 5141. Architectural History 1: Ancient through Renaissance. 3 Credit Hours.**

Traces the history of Western architecture from the ancient world to the high renaissance and mannerism of the late 16th century. The evolution of architectural thought, various formal languages (styles) and theoretical concepts are studied through the examination of selected buildings within their specific political, social, economic, and cultural milieu. Emphasis on the analysis of the ancient temple and the Christian church. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5142. Architectural History 2: Renaissance through 20th Century. 3 Credit Hours.**

Traces the history of Western architecture from the 17th century through the 20th century. The evolution of architectural thought, various languages (styles) and theoretical concepts studied through the examination of selected buildings within their specific political, social, economic, and cultural milieu. Analysis of the significant buildings of the baroque and rococo, the neo-classic and the romantic, modernist, and post-modernism periods. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5152. Materials and Methods of Construction. 3 Credit Hours.**

Introduction to construction materials, fundamentals of building construction, methods of assembling building systems in an integrated manner, and costing. Introduces specific regulatory issues dealing with zoning regulations, building codes, and barrier-free access requirements within the context of contemporary building techniques. Methods of construction in wood, masonry, concrete, and steel are described in detail and issues of enclosure, roofing, insulation, and finishes are presented. The course carries technical drawing requirements. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5231. Graduate Design Studio 1. 6 Credit Hours.**

The house as essential site of architecture. Consideration of relationships between program, culture, society and form making at a domestic scale; consideration of structure, space, shelter and place making; methods of construction, tectonics and detailing as design concerns; introduction to precedent study as research technique. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ARCH 5122.

**ARCH 5232. Graduate Design Studio 2. 6 Credit Hours.**

Studio with environmental sustainability focus - energy and resource use, hydrology, sustainable materials, infrastructure and building methods, recycling, environmental performance and quality; emphasis on systems and details (very large and very small); development of techniques for environmental analysis (observation, data analysis etc.); development of ecological and environmentally responsive design proposals; program development; introduction to design collaboration. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ARCH 5122 and ARCH 5231)

**ARCH 5251. Structural Analysis for Architects. 3 Credit Hours.**

This course covers loadings determination and evaluation, resolution and equilibrium of force systems, truss analysis, centroids, moments of inertia, shear and bending moment diagrams, basic beam, column, and system design. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5252. Str Des for Architects 1. 3 Credit Hours.**

Application of principles of engineering mechanics to layout, analysis, design, and detailing of structural elements in steel and wood of simple buildings. Flexural theory including elastic and plastic design is taught. Students will be familiarized with current building design codes as they relate to the structural design of building elements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5253. Str Des for Architects 2. 3 Credit Hours.**

Application of principles of engineering mechanics to layout, analysis, design, and detailing of structural elements in concrete and masonry of simple buildings. Students will be familiarized with current building design codes as they relate to the structural design of building elements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5296. Movements in Modern Architecture. 3 Credit Hours.**

History and theories of the architecture and urbanism of the modern period, from the beginning of the 19th century until the 1960's. Key ideas, texts and iconic buildings from the USA, Europe and other sites of the modernist diaspora are discussed. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5351. Env Control Systems 1. 3 Credit Hours.**

This course discusses the thermal and environmental processes that affect buildings and develops techniques for designers to respond to and manipulate thermal environments in ways that are integral with other building systems. Mechanical, electrical, and plumbing systems, heating, ventilation, and air-conditioning (HVAC) equipment, vertical transportation, communication, security, and fire protection systems and introduced. These are discussed against a backdrop of the principles of sustainability and environmental responsibility.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5411. Career Preparation. 1 Credit Hour.**

In this course, students will learn essential strategies for professional career advancement including strong communication, salary negotiation, presentation, and networking skills. It will provide skills for career advancement, enabling students to increase their marketability as prospective employees.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**ARCH 5412. Portfolio Design and Career Preparation. 3 Credit Hours.**

This seminar will assist students in the creation of a unique and successful professional portfolio for use in job placement and career advancement. The course will provide an overview of design presentation tools necessary for effective communication. Students will also learn essential strategies for professional career advancement including strong communication, salary negotiation, presentation, and networking skills, enabling them to increase their marketability as prospective employees.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 5596. Seminar in Architectural Theory. 3 Credit Hours.**

Theories of architecture and urbanism during the modern and contemporary periods; participation in critical theoretical discussions and the development of a research paper in response to critical feedback. The course serves to lay the ground for the theoretical development of thesis ideas. Development of individual portfolio of design work, a requirement for graduate students in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8000. Spec Top Sem in Practice. 3 Credit Hours.**

Graduate level seminar to familiarize and engage students in issues of Integrated Practice. The course centers on a discussion of major impacts of practice, and the ethical issues and responsibilities that we are faced with in the current era where BIM has the potential to change the roles in built environment disciplines, and impacts of globalization and sustainability drive our needs. The course addresses changes brought on in technology and practice management. Discussion and research can span a range of issues that affect practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Course Attributes:** SF

**Repeatability:** This course may be repeated for additional credit.

**ARCH 8011. Advanced Architecture Design Studio 1. 6 Credit Hours.**

Design studio focused on civic architecture that addresses the relationship and integration of building and site. The studio introduces ideas of comprehensive design that will be addressed more fully in ARCH 8013. The studio addresses the relationship of conceptual ideas and how they are addressed through understanding natural phenomena (ex. light and air, tactility) and building tectonics. The course requires students to consider the relationship of precedent studies and design development. Students will be required to develop and advance representation and visualization techniques appropriate to the project, peer critique and self-evaluation skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8012. Elect Arch Des Studio. 6 Credit Hours.**

Advanced architectural design studio. The topic of the studio varies in accordance with faculty expertise and research focus. This might include, but not be limited to an area of architectural, spatial, social, cultural or political practice, an interdisciplinary intersection such as architecture + biology / geology / war / the media / gender or business; research into materials, energy, structure, scripting, fabrication or other computational technologies. The course develops observational techniques and data collection, management and visualization appropriate to the topic of the studio. It requires spatio / temporal / material development, resolution and representation of an architectural design strategy at appropriate scales. Collaboration with aligned fields or disciplines may be undertaken if it is appropriate to the topic of the studio. Peer critique and evaluation are utilized as learning techniques and the capacity for independent work is developed. The course must be taken once, but may be taken up to three times for required credits as long as the topic covered is substantially different each time.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 8013. Comprehensive Architecture Design Studio. 6 Credit Hours.**

Comprehensive Design Studio: the integration of structural and environmental systems, programming, tectonics and detailing into architectural design and expression in holistic and environmentally sustainable ways; comprehensive representation of design; development of time management skills, peer critique and self evaluation; interaction with consultants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Co-requisites:** ARCH 8352.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in ARCH 5351.

**ARCH 8014. Architectural Design for Health. 6 Credit Hours.**

Advanced architectural design studio focused on design for health and health facilities. This will include understanding of human factors, equipment needs and trends, health design guidelines, design for well-being, etc. The course develops observational techniques and data collection, management and visualization appropriate to the topic of the studio. It requires spatio / temporal / material development, resolution and representation of an architectural design strategy at appropriate scales. Collaboration with aligned fields or disciplines may be undertaken if it is appropriate to the topic of the studio. Peer critique and evaluation are utilized as learning techniques and the capacity for independent and collaborative design work is developed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8015. Urban Ecologies and Design. 6 Credit Hours.**

Advanced architectural design studio focused on urban design. This will include understanding of human and community well-being in urban environments, environmental design trends, urban design guidelines, etc. The course develops observational techniques and data collection, management and visualization appropriate to the topic of the studio. It requires spatio / temporal / material development, resolution and representation of an architectural design strategy at appropriate scales. Collaboration with aligned fields or disciplines may be undertaken if it is appropriate to the topic of the studio. Peer critique and evaluation are utilized as learning techniques and the capacity for independent and collaborative design work is developed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8016. Advanced Technologies and Design. 6 Credit Hours.**

Advanced architectural design studio focused on advanced technologies in architectural design. This can include the range of current and emerging technologies in design process and implementation, visualization, etc. The course develops observational techniques and data collection, management and visualization appropriate to the topic of the studio. It requires spatio / temporal / material development, resolution and representation of an architectural design strategy at appropriate scales. Collaboration with aligned fields or disciplines may be undertaken if it is appropriate to the topic of the studio. Peer critique and evaluation are utilized as learning techniques and the capacity for independent and collaborative design work is developed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8096. Professional Practice. 3 Credit Hours.**

The course is required for internship in the architectural profession. It exposes students to the history, development and current status of the architectural profession and professional education and develops understandings of the trends and dynamics of contemporary architectural practice. It discusses what is required to properly serve clients and the common good; how to pursue, win, negotiate and prepare agreements and contracts; how to organize, manage, design, control costs, produce and administer contracts for the construction of architectural projects and how to organize, build and maintain architectural firms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8100. Spec Top Case St in Arch. 3 Credit Hours.**

Graduate level seminar that centers on comprehensive case studies in architecture as a form of primary research. The seminar discussion and research will focus on architectural works with the aim of learning about important aspects and overlaps that make architecture. In each case, the topics that drive the research and analysis will vary. Topics and issues will be guided by class discussion and the nature, scale and context of the architectural works. The course will address methods of analysis and techniques for visualization and presentation. It requires active participation in class discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 8131. Arch Research Seminar 1. 3 Credit Hours.**

Graduate level research seminar to familiarize and engage students in an area of contemporary urban research, its history, networks, strategies and techniques. It will develop methods and skills for the research and analysis of urban systems, economies, structures, infrastructures, spaces and / or cultures and techniques to visualize data and present research findings. The topic of the seminar varies in accordance with faculty expertise and research focus and might include, but not be limited to, approaches to sustainable urban development, ludic urban design strategies, advocacy based urbanism, user generated cities, computational urbanism, etc. The course takes a seminar format and requires active participation in class discussions. The course is required to be taken once in conjunction with ARCH 8011, but may be taken again for elective credit provided that the topic covered is different each time.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Course Attributes:** SI

**Repeatability:** This course may be repeated for additional credit.

**ARCH 8132. Arch Research Seminar 2. 3 Credit Hours.**

Graduate level seminar to familiarize and engage students in an area of contemporary architectural research, its history, networks, strategies, techniques. The topic of the seminar varies in accordance with faculty expertise and research focus. This might include, though not be limited to, questions about research as architectural practice, about architectural design as research, about architectural history, about architecture as spatial or political practice, or engage in any one of the interdisciplinary intersections currently re-energizing architecture - architecture + biology / war / media studies / post-colonial studies / gender studies / business etc. The course will develop methods and skills for architectural research and analysis and techniques for data visualization and research presentation. The course takes a seminar format and requires active participation in class discussions. The course is required to be taken once, but may be taken again for elective credit provided that the topic covered is different each time

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 8133. Arch Research Seminar 3. 3 Credit Hours.**

Graduate level seminar to familiarize and engage students in contemporary research in an area of architectural technology, its history, networks, strategies and techniques. The topic of the seminar varies in accordance with faculty expertise and research focus. This might include, though not be limited to materials research, energy research, structural research, fabrication, computational technologies, etc. The course will examine the history of the field, develop methods and skills for research and analysis and techniques for data visualization and research presentation. The course takes a seminar format and requires active participation in class discussions. The course is required to be taken once, but may be taken again for elective credit provided that the topic covered is different each time.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 8134. Architecture Research Seminar 4 - Urban Innovations: Technology, Environment and Health in Society. 3 Credit Hours.**

Graduate level research seminar to familiarize and engage students in an area of current and future trends and innovations in the urban context with a focus on technology, environment, and health. It will develop methods and skills for the research and analysis of urban systems, economies, structures, infrastructures, spaces and / or cultures and techniques to visualize data and present research findings. The topic of the seminar includes approaches to innovation and the integration of technology, natural and designed systems, strategies for a holistic approach to sustainability and healthy cities, human and environmental health and well-being. The course takes a seminar format and requires active participation in class discussions. The course is required to be taken by students in the Architecture for Health concentration of the MS Architecture degree and is an elective for other students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8146. Graduate Field Work Report. 1 Credit Hour.**

This course requires that students prepare an independent report of their study abroad, field work, or internship experience in a format that is agreed upon with the course coordinator.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 8233. Arch Des St Tokyo (G). 6 Credit Hours.**

A complex design investigation incorporating analysis of urban systems, observational research, data collection and analysis and the study of architectural precedents. The course immerses students in a foreign urban and architectural culture and asks them to engage in a complex design investigation, whose topic and scale is variable. Course may be used as equivalent of ARCH 8012 but may only be taken once.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8234. Arch Des Studio Rome (G). 6 Credit Hours.**

A complex design investigation incorporating analysis of urban systems, observational research, data collection and analysis and the study of architectural precedents. The course immerses students in a heritage urban and architectural locale and asks them to engage in a complex design investigation, whose topic and scale is variable. Course may be used as equivalent of ARCH 8012 but may only be taken once.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8241. Seminar: Analysis Urb Str (G). 3 Credit Hours.**

Research on urban systems and forms that have marked the development of Italian and Roman architecture from the 15th to the 18th century and that are now a reference point in every Western city: the piazza, the Roman palazzo, the theatre, the garden. The course is intended as a theoretical and analytical complement to the graduate architecture design studio in Rome. It fulfils the requirements of ARCH 8132.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8242. Urban Seminar Tokyo (G). 3 Credit Hours.**

This course provides students an overview of architecture and urbanization in historic and contemporary Japan. Economic, socio- political and technological forces that have shaped the built environment and architecture are discussed and the work of contemporary Japanese architects are studied and analyzed. The course is a theoretical and analytical complement to the Architecture Design Studio. It fulfils the requirements of ARCH 8132.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may not be repeated for additional credits.

**ARCH 8352. Environmental Control Systems 2. 3 Credit Hours.**

This course covers visual and audio environmental stimuli and architectural design responses to them. In addition, it discusses and introduces techniques for measuring the design of building systems for improved environmental performance, in terms of the efficiency of systems, environmental impact and capital and operational costs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Co-requisites:** ARCH 8013.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in ARCH 5351.

**ARCH 9182. Independent Study in Architecture. 1 to 3 Credit Hour.**

Graduate level independent study carried out by students interested in research that focuses on the various subdisciplines in architecture. Students must submit a proposal to a faculty member for review and approval that follows departmental guidelines for independent study. Topics and issues that guide the independent study can vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9280. Special Topics in Communication. 1 to 3 Credit Hour.**

Graduate level course that addresses current topics in graphic and visual communication in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9285. Architecture Internship. 1 to 3 Credit Hour.**

This course expands students' knowledge and professional experience through internships in architectural and other built environment firms. Students will be exposed to methods of practice and design thinking. The course requires that the student prepare a report in a format agreed upon with the course coordinator.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9380. Special Topics in History or Culture. 1 to 3 Credit Hour.**

Graduate level course that addresses current topics related to architectural history and/or cultural studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9480. Special Topics in Technology. 1 to 3 Credit Hour.**

Graduate level course that addresses current topics in digital or building technology in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9580. Special Topics in Site and Context. 1 to 3 Credit Hour.**

Graduate level course that addresses current topics in site and context in architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9682. Independent Research. 1 to 3 Credit Hour.**

Graduate level independent research in architecture. Students work with a faculty member according to an agreed upon syllabus and schedule. Topics and issues that guide the course work will vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9991. Directed Research. 3 Credit Hours.**

The development of a self motivated architectural design inquiry under the guidance of a faculty co-coordinator. This includes design research, the development of a design program, site investigation, analytical and speculative design investigations and / or experimentation with advanced visualization techniques. The course is seminar based and engages students in critical dialogue with their own and other students' work. It prepares students for undertaking an architectural design thesis the following semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may be repeated for additional credit.

**ARCH 9996. Architecture Design Thesis. 1 to 6 Credit Hour.**

Self directed architectural design thesis that follows on the research and design inquiries conducted in the fall semester. The course requires that students demonstrate the ability to undertake design research, develop a design program, conduct analytical and speculative design investigations and utilize advanced visualization techniques in the representation of their work. It culminates in a formal juried presentation and a textual document of a publishable standard of a graduate level design thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Architecture.

**Repeatability:** This course may be repeated for additional credit.

## Art (ART)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ART 5010. Special Topics in Art. 3 Credit Hours.**

In this studio art course, approaches to making and understanding images, objects and experiences in various media will be addressed. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5082. Independent Study. 1 to 3 Credit Hour.**

Self-directed study and research for graduate students in art developed in conjunction with, and supervised by, a full-time faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5110. Special Topics in Ceramics. 3 Credit Hours.**

Selected topics in ceramics. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5161. Graduate Photo Workshop: Digital Photography. 3 Credit Hours.**

State of the art technology merges with new issues related to digital imaging.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5203. Crash Course in Fibers and Material Studies. 3 Credit Hours.**

Offered to any Graduate Students at Temple, this class introduces interdisciplinary students to the Fibers studio. This course will review the tools and materials at the students' disposal, tailored to their practice, and access the studios.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ART 5210. Special Topics in Fibers and Material Studies. 3 Credit Hours.**

Selected topics in fibers and material studies. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5310. Special Topics in Glass. 3 Credit Hours.**

Selected topics in glass. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5401. Metals Workshop. 3 Credit Hours.**

A study of the work of internationally recognized metalsmiths leads to discussions of the philosophical bases of contemporary metalwork.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ART 5410. Special Topics in Metals and Jewelry. 3 Credit Hours.**

Selected topics in metals and jewelry. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5510. Special Topics in Painting. 3 Credit Hours.**

Selected topics in painting. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5604. Photographic Lighting. 3 Credit Hours.**

At the core of any commercial or fine art photographer's practice is an in-depth understanding of lighting. Light is the fundamental element that makes a photograph possible, and every successful photographer's control over light is the key to their success. This course will not only focus on allowing you to gain a thorough understanding of artificial lighting techniques, but also how to approach natural light situations better, and beyond that, to an understanding of how the two work in conjunction. By revisiting the fundamentals of the large format view camera, and developing an understanding of environmental and situational lighting techniques, you will learn different commercial and fine art approaches to working in a studio setting. You will also learn lighting techniques with digital and medium formats, as well as develop an understanding regarding the differences between digital capture and negative film. In addition this course will cover advanced exposure control, lighting on location, and product lighting. Note: This course is repeatable for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5606. Digital Projects. 3 Credit Hours.**

The emphasis of this course will be on creating a professional digital portfolio. Throughout the semester, students will learn a series of multimedia software applications and develop interactive presentations that will promote themselves as artists with contemporary and professional portfolios. Note: The course is limited to seniors and graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5607. Contemporary Photography. 3 Credit Hours.**

We live in an extraordinary moment in the history of photography, a moment much hoped for and anticipated by many champions of the medium. Finally one can say without qualification that photography is a medium fully embraced by the contemporary art world. While there has always been a movement to look at and discuss photography as art, photography has never played a more central, critical and vital role in contemporary art than it does now. This course will look at both the role that photography plays in contemporary art and the role that contemporary art plays in photography. By surveying contemporary trends in photography, students in this class will develop an understanding of what exactly photography is now. At the same time the class will attempt to answer questions about what it means to be contemporary, about what the relationship between the contemporary and the historical is, and why this might be important. Through these problems students will be encouraged to develop personal work that addresses themes and ideas discussed in the class. Note: Open to Junior/Seniors. Special authorization required for non-majors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5610. Special Topics in Photography. 3 Credit Hours.**

Selected topics in photography. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5612. Graduate Photo Process Workshop. 3 Credit Hours.**

Survey of experimental techniques, including hand applied, light-sensitive emulsions, ortho film making, photographic book arts, and 19th- and 20th-century processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 5710. Special Topics in Printmaking. 3 Credit Hours.**

Selected topics in printmaking. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.



**ART 5810. Special Topics in Sculpture. 3 Credit Hours.**

Selected topics in sculpture. Each topic will be addressed through contextual, procedural, material and critical lenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8001. Graduate Professional Practices. 3 Credit Hours.**

This course provides MFA students with insight into professional studio practices and the transition to post-MFA endeavors. It may include preparation and submission of materials for the MFA thesis exhibition, developing and refining an artist's statement, and other strategies that students can use to present their work and ideas to external audiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ART 8004. Critique and Critical Discourse I. 3 Credit Hours.**

Presenting work from their major area of study, students will engage in a critical dialogue regarding the development of their studio practice with peers from across the MFA degree programs. This presents the opportunity to develop skills in articulating the direction of their work, practice responding to questions in an extemporaneous manner, and contextualize their work in history, culture, and society. Conversely, students will be active participants in providing feedback and assessment of their peers in the class. Both scenarios will enhance the students' ability to observe, feel, evaluate, and reflect on artistic practice, and develop the written and verbal communication skills to share that information with others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ART 8005. Critique and Critical Discourse II. 3 Credit Hours.**

Presenting work from their major area of study, students will engage in a critical dialogue regarding the development of their studio practice with peers from across the MFA degree programs. This presents the opportunity to develop skills in articulating the direction of their work, practice responding to questions in an extemporaneous manner, and contextualize their work in history, culture, and society. Conversely, students will be active participants in providing feedback and assessment of their peers in the class. Both scenarios will enhance the students' ability to observe, feel, evaluate, and reflect on artistic practice, and develop the written and verbal communication skills to share that information with others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ART 8083. Graduate Projects: Painting and Sculpture. 3 to 6 Credit Hours.**

Creative studies for the master's degree candidate whose progress is reviewed in individual and group critiques. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8084. Graduate Projects: Painting and Sculpture II. 3 to 6 Credit Hours.**

Creative studies for the master's degree candidate whose progress is reviewed in individual and group critiques. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8101. Graduate Projects: Ceramics I. 3 to 6 Credit Hours.**

Creative studies in ceramics for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8102. Graduate Projects: Ceramics II. 3 to 6 Credit Hours.**

Creative studies in ceramics for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8201. Graduate Projects: Fibers I. 3 to 6 Credit Hours.**

Creative studies in fibers for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8202. Graduate Projects: Fibers II. 3 to 6 Credit Hours.**

Creative studies in fibers for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8301. Graduate Seminar, Ceramics/Glass/Fibers. 3 Credit Hours.**

Creative studies and discussions related to career concerns in these fields. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8302. Graduate Seminar, Ceramics/Glass/Fibers II. 3 Credit Hours.**

Creative studies and discussions related to career concerns in these fields. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8303. Graduate Projects: Glass I. 3 to 6 Credit Hours.**

Creative studies in glass for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8304. Graduate Projects: Glass II. 3 to 6 Credit Hours.**

Creative studies in glass for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8401. Graduate Seminar, Metals. 1 to 3 Credit Hour.**

A study of the work of internationally recognized metalsmiths leads to discussions of the philosophical bases of contemporary metalwork. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8402. Graduate Seminar, Metals II. 1 to 3 Credit Hour.**

A study of the work of internationally recognized metalsmiths leads to discussions of the philosophical bases of contemporary metalwork. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8403. Graduate Projects: Metals I. 3 to 6 Credit Hours.**

Creative studies in the areas of Metals, Jewelry and CAD/CAM for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8404. Graduate Projects: Metals II. 3 to 6 Credit Hours.**

Creative studies in the areas of Metals, Jewelry and CAD/CAM for the master's degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8501. Graduate Drawing. 3 Credit Hours.**

Exploration of individualized approaches to materials and ideas as they pertain to contemporary issues in drawing. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8502. Graduate Drawing II. 3 Credit Hours.**

Exploration of individualized approaches to materials and ideas as they pertain to contemporary issues in drawing. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8506. Theories of Visual Representation. 3 Credit Hours.**

Various readings in contemporary art issues or art theory are studied and discussed. Students are encouraged to bring up topics of personal interest.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8507. Graduate Seminar. 3 to 6 Credit Hours.**

Various readings in contemporary art issues or art theory are studied and discussed. Students are encouraged to bring up topics of personal interest. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8508. Graduate Seminar: Painting. 3 Credit Hours.**

Creative studies for the master's degree candidate whose progress is reviewed in individual and group critiques. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8509. Graduate Seminar II. 3 to 6 Credit Hours.**

Various readings in contemporary art issues or art theory are studied and discussed. Students are encouraged to bring up topics of personal interest. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8511. Graduate Painting Seminar II. 3 Credit Hours.**

Creative studies for the master's degree candidate whose progress is reviewed in individual and group critiques. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8583. Graduate Projects: Painting I. 3 to 6 Credit Hours.**

Creative studies for the master's degree candidate whose progress is reviewed in individual and group critiques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8584. Graduate Projects: Painting II. 3 to 6 Credit Hours.**

Creative studies for the master's degree candidate whose progress is reviewed in individual and group critiques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8601. Graduate Seminar in Photography. 3 Credit Hours.**

A seminar emphasizing individual research and group discussion of contemporary issues in photography. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8602. Graduate Seminar in Photography II. 3 Credit Hours.**

A seminar emphasizing individual research and group discussion of contemporary issues in photography. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8683. Graduate Projects: Photography I. 1 to 12 Credit Hour.**

Individual conferences and group seminars. Emphasis on mastery of conceptual and technical practices with lens-based media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8684. Graduate Projects: Photography II. 1 to 12 Credit Hour.**

Individual conferences and group seminars. Emphasis on mastery of conceptual and technical practices with lens-based media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8701. Graduate Seminar in Printmaking. 3 Credit Hours.**

Philosophy and theory of contemporary printmaking practices. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8702. Graduate Seminar in Printmaking II. 3 Credit Hours.**

Philosophy and theory of contemporary printmaking practices. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8783. Graduate Projects: Printmaking I. 3 to 12 Credit Hours.**

Individual conferences and group seminars. Emphasis on diversity of command in several printmaking media. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8784. Graduate Projects: Printmaking II. 3 to 12 Credit Hours.**

Individual conferences and group seminars. Emphasis on diversity of command in several printmaking media. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8801. Graduate Seminar: Sculpture. 3 to 6 Credit Hours.**

This class gives the graduate student a chance to formally meet with their peers in a group critique situation to discuss their own work or that of their classmates. Individual meetings with the instructor are another component. The class also makes visits to emerging artists' studios in New York and Philadelphia. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8802. Graduate Sculpture Seminar II. 3 to 6 Credit Hours.**

This class gives the graduate student a chance to formally meet with their peers in a group critique situation to discuss their own work or that of their classmates. Individual meetings with the instructor are another component. The class also makes visits to emerging artists' studios in New York and Philadelphia. Note: This course can only be taken twice for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Painting, Sculpture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8883. Graduate Projects: Sculpture I. 3 to 6 Credit Hours.**

This class gives the graduate student a chance to formally meet with their peers in a group critique situation to discuss their own work or that of their classmates. Individual meetings with the instructor are another component. The class also makes visits to emerging artists' studios in New York and Philadelphia. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8884. Graduate Projects: Sculpture II. 3 to 6 Credit Hours.**

This class gives the graduate student a chance to formally meet with their peers in a group critique situation to discuss their own work or that of their classmates. Individual meetings with the instructor are another component. The class also makes visits to emerging artists' studios in New York and Philadelphia. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 8985. Teaching in Higher Education. 3 Credit Hours.**

This course enhances knowledge of how people learn and encourages participants to expand and diversify teaching methods. The course requires class discussion of readings and activities, provides individualized feedback on assignments, and opportunities for self-reflection along with reflection from the learning community of colleagues. The course will also address discipline-specific considerations of teaching studio art and design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ART 8986. Teaching Effectively in the Creative Disciplines. 3 Credit Hours.**

In this course, we will focus specifically on the particular needs of the creative arts classrooms and studios, and how our pedagogical choices can lead our students to develop as professionals in our creative fields. Building on the tools we have gained in the first course of the certificate, we will think deeply about how to develop students' creative process and product, as well as their ability to articulate their vision and evaluate others' work in an informed manner. This course will help teachers employ strategies that explore motivation, encourage reflection and criticality, and help their students build a context for the creative and design lessons they undertake.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in EPSY 8985 and EPSY 8960 (may be taken concurrently)

**ART 9184. Graduate Thesis Exhibition: Clay. 3 Credit Hours.**

The culminating visual presentation of the candidates' creative research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 9195. Graduate Thesis Research: Ceramics and Glass. 3 Credit Hours.**

Research projects in the areas of teaching or technology are developed in consultation with the candidates' professor and advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 9202. Graduate Thesis Research: Fibers. 3 Credit Hours.**

Research projects in the areas of teaching or technology are developed in consultation with the candidates' professor and advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 9284. Graduate Thesis Exhibition: Fibers. 3 Credit Hours.**

For graduate students in the Fibers area, working toward their M.F.A. degree. This course is required in the fourth semester of their residency. The work in this course is to culminate in the thesis exhibition.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in ART 9202 and minimum GPA of 3 in: courses numbered 5000 to 9999.

**ART 9384. Graduate Thesis Exhibition: Glass. 3 Credit Hours.**

The culminating visual presentation of the candidates' creative research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 9401. Graduate Thesis Research: Metals. 3 Credit Hours.**

Research projects in the areas of teaching, history, or technology are developed in consultation with the candidates' professor and advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 9484. Graduate Thesis Exhibition: Metals. 1 to 3 Credit Hour.**

The culminating visual presentation of the candidates' creative research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ART 9991. Directed Studio Practice. 3 Credit Hours.**

In conjunction with Graduate Projects, Directed Studio Practice forms the core studio practice and research components of the MFA degree program in the studio arts. The course is driven by independent study and research, under the mentorship of a faculty member in your core studio discipline.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**ART 9995. Master of Fine Arts Thesis. 1 to 3 Credit Hour.**

In conjunction with Graduate Projects, Master of Fine Arts Thesis is the culmination of the core studio practice and research components of the MFA degree program in the studio arts. The course is driven by independent study and research, under the mentorship of a faculty member in your core studio discipline, culminating in the Thesis Exhibition in the final semester of study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

## Art - Japan Campus (ARTU)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ARTU 5301. Introduction to Relief Painting. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTU 5601. Introduction to Computer Imaging. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTU 5605. Introduction to Internet Imaging. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTU 5801. Basic Photography Black and White I. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTU 5811. Introduction to Digital Photography. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Art Education (ARTE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ARTE 5003. Inclusive Art Education K-12 Students in the Art Room. 3 Credit Hours.**

Learn about the scope of different disabilities that may present themselves in the art room including intellectual, learning, and physical disabilities; and visual, hearing, emotional, and behavior disorders. Effective instructional strategies for inclusive practices to meet the unique, diverse learning and special educational needs of K-12 students in the art room, including methods of assessment and accommodations are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** ARTE 5888.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ARTE 9187.



**ARTE 5082. Independent Study. 1 to 3 Credit Hour.**

Self-directed study and research initiated by a graduate student with an independent study contract developed in conjunction with, and supervised by, a faculty member in the art education and community arts practices department.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTE 5100. Special Topics. 3 Credit Hours.**

A selected topic in the field of art, art education, art therapy or community arts will be examined. NOTE: Field trips may be required for this class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTE 5202. Teaching Artists. 3 Credit Hours.**

This course offers graduate students from all arts and culture fields an overview of the teaching artist profession. Teaching artists work in art centers, community-based arts programs, health facilities, senior centers, prisons, museums, in-school and out-of-school sites. Direct fieldwork and site-specific research will examine the intersections of one's personal art practices and community-based art education. The experiential component will be accompanied by scholarly inquiry into the role and relevance of artistic engagement in public life. Course material will encompass the history of the teaching artist profession, theory and practice with emphasis on pedagogical approaches, survey of settings and practical applications. The course will equip students with tools that can be used in developing and marketing arts residencies in multiple settings. Guest presentations by teaching artists and community arts administrators will be included in this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**ARTE 5888. Student Teaching. 6 Credit Hours.**

Students assume responsibility for direction of classes and lesson planning in both elementary and secondary schools. The practical experience is enriched through seminar discussions focusing on the enterprise of teaching. NOTE: Application Materials must be submitted during pre-registration the semester prior to taking the course. Meeting with the Art Education advisor is recommended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** ARTE 5003.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in ARTE 9187.

**ARTE 8001. Contemporary Issues in Art Education. 3 Credit Hours.**

A seminar designed to examine some of the current literature in the field of Art Education together with its problems and the fundamental concepts derived from related disciplines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTE 8002. History of Art Education. 3 Credit Hours.**

A historical and philosophical overview of art teaching traditions and beliefs in American schools, with special emphasis on the late nineteenth and early twentieth centuries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTE 8003. Art Education Research. 3 Credit Hours.**

Sessions arranged through consultation with the advisor. Examination of the traditional and current designs related to descriptive, empirical, and experimental studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTE 8004. Introduction to Art Therapy. 3 Credit Hours.**

This course is designed to offer students a didactic and experiential introductory overview of the field of art therapy. Material covered will include history, theory, and practice of art therapy processes and approaches as well as a survey of populations, settings, and applications. Lectures, readings, discussion, audiovisual presentations, experiential exercises, and guest presentations comprise the structure of this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTE 8011. Interdisciplinary Seminar in Community Arts. 3 Credit Hours.**

An introduction to the field of Community Arts, focusing on history and theory, and bringing students into contact with established community arts projects in Philadelphia through site visits and guest lectures. Issues of aesthetics, race and social class are an implicit part of community-based arts practices and are a focal point of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTE 8087. Research and Project Planning Seminar in Community Arts. 3 Credit Hours.**

Working with faculty artists in a particular community, students engage in community data collection using methodologies of personal interviews, observation, and background cultural research with a focus on relationship building. Research findings are integrated to address emerging themes through conceptual design of an art project in a research paper outlining key community themes/issues and proposed art projects. Students will document community knowledge and oral histories and share stories with members of community. Stories will be incorporated into artworks that reflect community traditions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in ARTE 8011.

**ARTE 8187. Field Work in Community Arts. 3 Credit Hours.**

Students work with artists in partnership with local community arts programs, organizations, and families, collaborating in the creation of a community arts production. In the weekly seminar, students reflect on their practice, receive supervision and conduct team research to develop their contributions to community arts projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in ARTE 8011 and ARTE 8087.

**ARTE 8287. Evaluation and Documentation Seminar in Community Arts. 3 Credit Hours.**

In this course students will learn and apply methods for evaluation and ongoing work in the phase of Community Arts projects which follows public exhibition/performance, including assessment of artistic process, product, and community impact; approaches to continuing community involvement, and transitioning of project ownership to the community. The course offers students a variety of media for documenting and assisting community members to document Community Arts projects that may take the form of of scholarly articles, video and audio documentary, community feedback and personal essays/journals that contribute knowledge to the field of Community Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in ARTE 8011, ARTE 8087, and ARTE 8187.

**ARTE 9187. Graduate Materials and Methods in Art. 3 Credit Hours.**

Aims of art education as related to elementary and secondary curricula. A weekly school assignment in which the student both observes an art class and serves as an aide to the teacher.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in EPSY 5541 and EPSY 5531.

**ARTE 9991. Directed Research. 1 to 3 Credit Hour.**

Directed Research while still in the coursework phase of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTE 9995. Master's Thesis Research & Writing. 1 Credit Hour.**

In this course, Master's students in Art Education will work closely with a faculty member on research and writing of the Master's Thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in (ARTE 8001, ARTE 8002, and ARTE 8003)

## Art History (ARTH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ARTH 5097. Graduate Design: Graduate Design Theory. 3 Credit Hours.**

This course will introduce students to contemporary design theories and discourse. It will examine the theoretical aspects of artifacts through their making, reading, and dissemination. Graphic design and communication theories will be compared to those in literature and architecture. Students will use discussion, writing, presentations, and design to investigate contemporary design issues. Emphasis will be placed on forming and articulating an individual point of view in discussion and writing. Based on the semester-long discussion about how we visually communicate, all students will draw a revised diagram of the Communication Model developed by Meredith Davis in 2012. Students will also write a 1000-word reflection on the factors that have influenced this eight-year evolution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 5350. Topics in Arts Administration. 3 Credit Hours.**

Selected topics in arts administration, focusing on contemporary arts of interest, such as mission, values and community; philanthropy in arts administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5351. Introduction to Arts Management Practice: Mission, Values and Community. 3 Credit Hours.**

Arts Administration describes a vibrant scope of thought and activity that kindles and advances creativity, connects artists and audiences, and creates programs and policies that enhance intellectual and civic life. This course provides an introduction to institutional (and anti-institutional) models, and skills that support creation, exhibition, public education and community building through art including: museums, exhibition spaces, collectives, philanthropies, community arts centers and residencies. The aesthetic, demographic and political dynamics shaping the current cultural moment challenge the field to reexamine its history, practices, foundational assumptions, operations and programs and the ways in which leadership is expressed. Therefore, our exploration of the fundamentals of budgeting, finance, governance, policy, the role of philanthropy, management and operations will be framed by current questions of mission, institutional ethics, cultural equity, access and service. The focus will be on non-profit cultural models, both traditional and emerging, but the course will also touch on characteristics shared with "for-profit" creative enterprises and how cultural trends influence relationships between the commercial and non-profit sectors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 5360. Topics in Latin American Art. 3 Credit Hours.**

A selected topic on Latin American, Caribbean, and U.S. Latinx art and visual culture will be examined. Topics can range from colonial and post-Independence to modern and contemporary art with a focus on the intersections of race, gender, ethnicity, and class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5370. Topics in Contemporary Art. 3 Credit Hours.**

A selected topic on contemporary art and visual culture will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5380. Topics in Global Art. 3 Credit Hours.**

A selected topic on global art and visual culture will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5390. Topics in Islamic Art. 3 Credit Hours.**

This course provides students with an introduction to the art and architecture of the Mediterranean and Middle East during the first centuries of Islam, ca. 650-1250 - a vibrant period that witnessed the emergence of one of the world's most wide-spread and enduring faith traditions. Through the investigation of key objects and architectural monuments, students will be trained to analyze how aspects of visual culture and the built environment relate to the social and political contexts in which they were produced. Particular emphasis will be placed on the establishment of new spatial and visual vocabularies, the legacies of earlier artistic traditions in the formation of Islamic art, as well as cross-cultural exchange between the Islamic world and its neighbors (particularly Western Europe and East Asia). We will also address the importance of modern interpretations of early Islamic art, especially the politics of collecting and museum display. In addition to lectures, students will meet with the instructor for an additional hour every week to discuss advanced readings. They will also be asked to take a midterm and final exam, which will account for 30% of their final grade. The remaining portion of their grade will be dedicated to developing a research paper (ca. 20 pages), the topic of which will be determined in consultation with the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5400. Topics in Art History. 3 Credit Hours.**

Selected topics in art history. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5403. History of Modern Crafts and Design. 3 Credit Hours.**

This course will examine the interwoven histories of craft and design in the 20th and 21st centuries, looking in particular at how craft and design both mirror the various artistic, cultural, political, social, and technological contexts in which they are created, and have the capacity to critique and change those contexts. Taking a thematic approach, students will not only gain familiarity with influential objects, makers, materials, and movements from around the world, but also explore relevant topics and frameworks including production and consumerism, sustainability, popular culture, activism and reform, intersectionality, and accessibility via craft and design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 5405. History of Photography. 3 Credit Hours.**

Examination of key developments in the history of modern photography.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 5408. The History of Printmaking and Print Culture. 3 Credit Hours.**

The invention of the printing press in western Europe in the 1400s contributed to important and lasting changes about how people thought about images and image-making. In addition to gaining an understanding of the technical processes involved in the production of books, woodcuts, engravings, etchings, and lithographs, students will focus on the social and economic facets of print communication as an aesthetic and as a compelling component of visual culture. The course is designed chronologically but also according to themes and major artists, with the aim of relating the history of print and book culture to some of the broader cultural and artistic concerns of the period. Some of the central issues we shall discuss are the relationship between manuscript and early book production; the nature of the 'original' vs. the 'copy'; the space of prints as a realm for experimentation and new subject matter; the role of collaboration and also individual graphic virtuosity; and the modern 'print revivals' of the 19th and 20th centuries. We also shall reevaluate certain myths about the so-called printing revolution, poised as we are in a new digital age defined as another kind of explosion of images. Major figures we will study in terms of graphic virtuosity are Andrea Mantegna, Albrecht Dürer, Jacques Callot, Hendrick Goltzius, Rembrandt van Rijn, Giovanni Battista Piranesi, Francisco Goya, Edouard Manet, James Abbott McNeill Whistler, Mary Cassatt, Edvard Munch, and Käthe Kollwitz.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 5460. Topics in Contemporary Art. 3 Credit Hours.**

Selected topics in contemporary art will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5470. Topics in the Arts of the African Diaspora. 3 Credit Hours.**

A selected topic in the arts of the African diaspora. Topics can range from the early modern period to contemporary art.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Education, Master of Fine Arts, Doctor of Philosophy.

**ARTH 5500. Topics in Art History II. 3 Credit Hours.**

Selected topics in art history. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5510. Topics in Ancient Art. 3 Credit Hours.**

Selected topics in ancient art. Recent topics have included Greek Vase Painting, Greek Architecture, Minoan and Mycenaen Art, Hellenistic and Roman Sculpture, Greek and Roman Monumental Painting, and Curating an Exhibition on the History of Archaeological Illustration. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5520. Topics in Medieval Art. 3 Credit Hours.**

A select specialized topic in the visual culture of the Middle Ages will be explored. Field Trips are mandatory for this class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5530. Topics in Renaissance Art. 3 Credit Hours.**

Recent or planned topics include Artistic Exchange between Italy and Northern Europe; Mannerism Redefined; Color and Meaning in Painting; Renaissance Architecture; Bernini, Caravaggio, and Velasquez; Michelangelo; and The Sacred Image in the Renaissance: Crisis and Resolution. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5540. Topics in Early Modern Art. 3 Credit Hours.**

Selected topics in the art of the early modern period. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 5550. Topics in 19th-Century Art. 3 Credit Hours.**

Recent and planned topics include Manet and 19th century French Criticism; Impressionism and Post-Impressionism; Pre-Raphaelite Painting; Symbolism; Depicting Race; and American Cosmopolitans: Art and Modernity in the Gilded Age, 1870-1913. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5560. Topics in 20th-Century Art. 3 Credit Hours.**

Recent and planned topics include Art since 1945; Dada and Surrealism; Futurist Art and Theory; and Picasso, Matisse, Duchamp, and Brancusi. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5601. Historiography of Art History. 3 Credit Hours.**

Study of key methods and critical approaches in art history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 5621. Archeological Program. 3 Credit Hours.**

Study in Ancient Art and Archaeology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5630. Topics in Renaissance Art II. 3 Credit Hours.**

Recent or planned topics include Artistic Exchange between Italy and Northern Europe; Mannerism Redefined; Color and Meaning in Painting; Renaissance Architecture; Bernini, Caravaggio, and Velasquez; Michelangelo; and The Sacred Image in the Renaissance: Crisis and Resolution. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5660. Topics in Modern and Contemporary Art. 3 Credit Hours.**

Selected topics in modern and contemporary art will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 5665. Modern and Contemporary Art in Latin America. 3 Credit Hours.**

This course examines art in Latin America from 1900 to the present. Covering a period of tumultuous societal change in the region, from revolutions to economic booms and military dictatorships, discussions will focus on understanding the distinct contexts of artistic production in various Latin American centers, with particular attention to the artists and artistic movements of Brazil and Mexico and including consideration of major architectural projects. We will examine how artists conceived of their work in relationship to local and international aesthetic and political debates. Students will read criticism and artists' writing from the period as well as recent theory and historical analysis and attention will be placed on developing skills to analyze a range of media and styles, including figurative and abstract practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 5670. Topics in Contemporary Art. 3 Credit Hours.**

A selected topic on contemporary art and visual culture will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 8401. Text + Image: Framing the Modern Illustrated Book. 3 Credit Hours.**

Text or Image? Art or Craft? Page or Book? Essential or Ancillary? As these pairings propose, illustration engages the viewer in complex interrelated processes and hence functions very differently than other art forms. Image and text operate both independently and in combination as signifiers. Perhaps that is partially why we lack a critical framework with which to assess illustrated books. In this online course, we will use digital tools and collaborative technologies to develop evaluative criteria for the illustrated book and then apply this critical framework to an individually-selected case study. The seminar will also assess relevant factors impacting the development of illustrated books, such as cultural diffusion and interchange; patterns of literacy and education; production markets and aesthetic value of craft. Additionally, in the last part of the course, the focus will shift to book illustration in the period after 1850, addressing publishing technologies as well as noteworthy avant-garde exemplars. This has been created as an online course, which allows for a greater flexibility in the student's schedule; it may be adjusted for full classroom or hybrid. NOTE: Designed especially for current students enrolled in the MFA programs, in particular students of Graphic Design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 8402. Introduction to Critical Thinking and Practice. 3 Credit Hours.**

Students will explore major critical theories in the context of globalism, ethics, race/class, environment, and history of art. Students will obtain a basic familiarity with major critical theorists, authors, and thinkers, learning how to put the ideas from these thinkers in historical, economic, and political contexts. They will apply critical theory to creative practices, including their own. The course is partly lecture-based and partly discussion-based, and is intended to be taken by all first-year MFA students in order to provide them with a strong base for their own work and their evaluation of the work of other artists, both past and present. This class will only be offered in the Fall semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 8404. The History, Theory, and Practice of Printmaking. 3 Credit Hours.**

In this course we will examine the proliferation of printed images, particularly in western Europe and the Americas, beginning around 1450. Note that we will hold at least half of our weekly classes in the Print Study Room of the Philadelphia Museum of Art and on site at other collections, spending time studying the objects themselves. In addition to gaining an understanding of the processes involved in the making of woodcuts, engravings, etchings, and lithography, students will focus on the conceptual, social, political, and economic aspects of the art of the print. The course is designed chronologically but also according to themes and major artists, with the aim of showing that printmaking has its own history and at the same time relates to the broader cultural and artistic concerns of the period. Major figures we will study in terms of graphic virtuosity include Albrecht Dürer, Marcantonio Raimondi, Jacques Callot, Hendrick Goltzius, Rembrandt van Rijn, Giovanni Battista Piranesi, Francisco Goya, Mary Cassatt, James Abbott McNeil Whistler, and Otto Dix, among others. Students will have the opportunity to develop papers that dovetail with their own fields and interests, as well as with additional strengths of the museum collection, including Japanese, and modern American and Mexican prints.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 8450. Special Projects. 3 to 6 Credit Hours.**

Selected topics in art theory and criticism. Content varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Education, Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 8460. Seminar in Contemporary Art. 3 Credit Hours.**

Selected topics in contemporary art. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8470. Seminar in Modern Art. 3 Credit Hours.**

Selected topics in modern art. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8475. Seminar in 19th-Century Art. 3 Credit Hours.**

Selected topics in 19th-century art will be examined. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8480. Seminar in Early Modern Art. 3 Credit Hours.**

Selected topics in the early modern period will be examined. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8500. Seminar in Arts Management. 3 Credit Hours.**

This course will explore a variety of topics in Arts Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 8560. Seminar in Modern and Contemporary Art. 3 Credit Hours.**

Selected topics in modern and contemporary art will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 8610. Seminar in Ancient Art. 3 Credit Hours.**

Selected topics in ancient art. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8620. Seminar in Medieval Art. 3 Credit Hours.**

Selected topics in medieval art. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8630. Problems in Renaissance Art. 3 Credit Hours.**

Recent or planned topics include Michelangelo and His Times; After Raphael: Painting in Central Italy; Michelangelo's Last Judgment; Beyond Florence: Artistic Centers in the 15th Century; Palladio and His Legacy; and Titian, Tintoretto, and Veronese. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 8635. Problems in Northern Renaissance Art. 3 Credit Hours.**

This course is a focused graduate seminar on a topic relating to an aspect of Northern Renaissance Art, ca. 1400-1575. Recent or planned topics include Reconsidering the German Renaissance; Dürer and His World; The Disintegration of the Northern Altarpiece; The Renaissance Print; Northern Realisms; Pieter Bruegel and the Invention of Painted Genres; Art, the Reformation, and Iconoclasms; and Early Modern Trade and the Global Renaissance. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for a total of 6 credit.



**ARTH 8640. Seminar in Global Baroque Art. 3 Credit Hours.**

Selected topics in Baroque art. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8660. Seminar in 20th-Century Art. 3 Credit Hours.**

Selected topics in the art of the 20th century will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 8665. Seminar in 21st-Century Art. 3 Credit Hours.**

This course is a focused graduate seminar on a topic relating to an aspect of contemporary and/or 21st-century art. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8675. Seminar: Arts of the African Diaspora. 3 Credit Hours.**

This course is a focused graduate seminar on a topic related to an aspect of the arts of the African diaspora within the early modern to contemporary period. This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Education, Master of Fine Arts, Doctor of Philosophy.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ARTH 8690. Problems in Islamic Art. 3 Credit Hours.**

Selected topics in Islamic art. Future topics include Orientalism/Occidentalism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 8872. Arts Management Capstone. 3 Credit Hours.**

This is the capstone course for students in the MA in Art History Arts Management Track.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ARTH 9183. Archaeological Program. 3 Credit Hours.**

Seminar study in Ancient Art and Archaeology as directed by advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9585. Internship Seminar. 3 to 6 Credit Hours.**

For students in the fine arts administration track. Placement in a local museum or gallery (e.g., Temple University Gallery in Center City, Philadelphia) or other appropriate institutions. To be arranged with the graduate director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9586. Internship Seminar. 3 to 6 Credit Hours.**

For students in the fine arts administration track. Placement in a local museum or gallery (e.g., Temple University Gallery in Center City, Philadelphia) or other appropriate institutions. To be arranged with the graduate director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9891. Directed Research. 1 to 3 Credit Hour.**

Faculty-directed research on a specific topic. To be arranged with faculty sponsor and graduate director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9991. Directed Research. 1 to 3 Credit Hour.**

Faculty-directed research on a specific topic. Directed Research while still in the coursework phase of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9993. Comps Study. 1 to 3 Credit Hour.**

Preparation for comprehensive examinations. Masters students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Preparation for preliminary examinations. Doctoral students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9995. Research for Qualifying Paper. 1 to 3 Credit Hour.**

Research and writing of the qualifying paper. Restricted to Master's-level students only, after course work has been completed. Enrollment in this course will qualify the student for full-time status.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9996. Thesis Research. 1 to 3 Credit Hour.**

Research and writing of the master's thesis. Masters students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Research of dissertation proposal. Doctoral students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ARTH 9999. Dissertation Research. 1 to 6 Credit Hour.**

Restricted to Doctoral students elevated to candidacy writing the dissertation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Art Therapy (ARTT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ARTT 8004. Introduction to Art Therapy. 3 Credit Hours.**

This course is designed to offer students a didactic and experiential introductory overview of the field of art therapy. Material covered will include history, theory, and practice of art therapy processes and approaches as well as a survey of populations, settings, and applications. Lectures, readings, discussion, audiovisual presentations, experiential exercises, and guest presentations comprise the structure of this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Athletic Training (ATHT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ATHT 5142. Foundations of Athletic Training. 4 Credit Hours.**

Through lecture and laboratory exercises, the student will obtain both didactic information and practical application of athletic training skills, including basic taping and bracing techniques, acute and emergency management, stretching, and equipment fitting and removal. Additionally, legal and ethical issues will be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 5143. Orthopedic Assessment I. 3 Credit Hours.**

This required course will focus on the key concepts of evaluation, diagnosis, and management of lower extremity sports-related injuries. Students will be able to use an evidence-based approach to identify, explain, and assess pathologies of musculoskeletal injuries in the lower extremity and apply these concepts in real-life athletic training scenarios.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 5182. Independent Study in Athletic Training. 1 to 3 Credit Hour.**

This course offers individual investigation in athletic training practice or research under the guidance of a mentor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**ATHT 5244. Orthopedic Assessment II. 3 Credit Hours.**

This is a required three credit hour course that will focus on the key concepts of evaluation, diagnosis, and management of upper-extremity and axial skeleton sports-related injuries. Students will be able to use an evidence-based approach to identify, explain, and assess pathologies of musculoskeletal injuries in the upper extremity and axial skeleton and apply these concepts in real-life scenarios.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5143 or KINS 5143)

**ATHT 5245. General Medical Conditions in Athletic Training. 4 Credit Hours.**

This course will focus on the key concepts of evaluation, diagnosis, and management of general medical conditions commonly seen in the athlete. Students will be able to use an evidence-based approach to identify, explain, and assess pathologies and apply these concepts in real-life scenarios.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5142 or KINS 5142)

**ATHT 5247. Leadership for the Entry-Level Athletic Trainer. 1 Credit Hour.**

This 1 credit hour course will focus on the history of athletic training and its continued growth as a healthcare profession. Students will determine their leadership style and practice conflict resolution skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 5287. Practicum in Athletic Training I. 3 Credit Hours.**

This course accompanies the first clinical experience in the athletic training curriculum in order to further develop and enhance the practical skills and knowledge necessary for clinical practice. Students will review and demonstrate lower extremity injury evaluations, foundational athletic training skills, and emergency management techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5142 or KINS 5142) and (ATHT 5143 or KINS 5143)

**ATHT 5443. Organization and Administration in Athletic Training. 3 Credit Hours.**

This three-credit hour lecture/seminar course will focus on the aspects of professional management and administrative issues in athletic training, including program management, human resources, insurance, risk management, ethics, pre-participation examinations and facility design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5247 or KINS 5247)

**ATHT 5444. Therapeutic Interventions in Athletic Training. 5 Credit Hours.**

This lecture and laboratory course provides current evidence and best practices for the implementation of therapeutic interventions and modalities targeted for the physically active population from the time of injury to the return to participation in sports and activities. Students will gain knowledge and experience in the theory and application of therapeutic interventions throughout the injury management spectrum. Upon completion of the 5-credit course, students will be able to apply evidence-based therapeutic guidelines to create a comprehensive treatment and rehabilitation protocol.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Sci in Athletic Train.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5244 or KINS 5244)

**ATHT 5445. Considerations for Healing. 4 Credit Hours.**

Through lecture and laboratory exercise, the student will examine the body's response to injury and pain, within the framework of the Disablement Model. Students will explore pathology, histology, nutrition, behavioral therapies, and pharmacological interventions as they are directed through the continuum of care. Upon completion of this 4-credit course, students will be able to implement a patient-centered plan of care across a spectrum of injuries and illnesses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5244 or KINS 5244), (ATHT 5245 or KINS 5245), and (ATHT 5287 or KINS 5287)

**ATHT 5487. Practicum in Athletic Training II. 3 Credit Hours.**

This 3-credit course is designed to accompany the second clinical experience in the athletic training curriculum to further develop and enhance the practical skills and knowledge necessary for clinical practice. Students will review and demonstrate upper extremity and postural evaluations, general medical assessments, and leadership skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Sci in Athletic Train.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5244 or KINS 5244), (ATHT 5245 or KINS 5245), and (ATHT 5287 or KINS 5287)

**ATHT 5644. Applied Research in Athletic Training. 3 Credit Hours.**

This three-credit course will introduce the fundamentals of research design and interpretation, including basic statistical analysis. Students will read, summarize, and interpret current literature related to athletic training and determine how it applies to clinical practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5487 or KINS 5487)

**ATHT 5645. Board of Certification Examination Preparation. 2 Credit Hours.**

This 2-credit course will focus on the directed study for the Board of Certification (BOC) examination. Through the use of self-assessments, students will identify areas of strengths and weaknesses, create tailored study plans, and complete practice examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5487 or KINS 5487), (ATHT 5444 or KINS 5444), and (ATHT 5445 or KINS 5445)

**ATHT 5687. Practicum in Athletic Training III. 2 Credit Hours.**

This two-credit course is designed to accompany the fourth clinical experience in the athletic training curriculum to further develop and enhance the practical skills and knowledge necessary for clinical practice. Students will review and demonstrate therapeutic exercise and modality applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5487 or KINS 5487), (ATHT 5444 or KINS 5444), and (ATHT 5445 or KINS 5445)

**ATHT 5808. Advanced Sport Concussion. 3 Credit Hours.**

This online course is designed to provide students information about sport concussion. It is geared towards graduate students seeking to augment their concussion education. It is open to all students, but also serves to supplement specific student learning objectives for graduate Athletic Training Education students. Graduate students will receive targeted course lectures, readings, and online resources on topics such as concussion pathomechanics, pathophysiology, recognition, assessment, management, and return to play guidelines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 5851. Current Trends in Athletic Training. 3 Credit Hours.**

Through the use of current literature and content experts in the field, this three-credit course will provide advanced information regarding clinically relevant topics related to athletic training and sports medicine practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5443 or KINS 5443)

**ATHT 5852. Transition to Athletic Training Clinical Practice. 3 Credit Hours.**

This three-credit course will serve as the students' capstone experience and focus on preparing students to transition from the classroom to clinical practice. Students will submit a portfolio that includes completed competencies, resume, cover letter, and professional development units.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5645 or KINS 5645)

**ATHT 5888. Immersive Clinical Practice in Athletic Training. 1 Credit Hour.**

Immersive Clinical Practice in Athletic Training is designed to provide athletic training students with a clinical experience opportunity to further develop, enhance, and practice skills and knowledge necessary for clinical practice and the continuum of patient care. This course will be completed in the Early-Term Start period, allowing the student to be with their assigned preceptor full-time for the duration of the course. Students must complete between 75 and 100 supervised hours, record patient-encounters, create a plan of care, and complete a final reflection of their experience. Background checks, CPR certification, and medical requirements must be current.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Sci in Athletic Train.

**Repeatability:** This course may be repeated for a total of 2 credit.

**Pre-requisites:** Minimum grade of B- in (ATHT 5487 or KINS 5487), (ATHT 5444 or KINS 5444), and (ATHT 5445 or KINS 5445)

**ATHT 5988. Advanced Immersive Clinical Practice in Athletic Training. 2 Credit Hours.**

Advanced Immersive Clinical Practice in Athletic Training is designed to provide athletic training students with a clinical experience opportunity to further develop, enhance, and practice skills and knowledge necessary for clinical practice, the continuum of patient care, and organizational and administrative duties. This course will be completed in the final semester within the MSAT program, allowing the student to be with their assigned preceptor full-time for the duration of the course. Students must complete between 250 and 300 supervised hours, record patient-encounters, create a plan of care, critique current site policy and procedures, and complete a final reflection of their experience. Background checks, CPR certification, and medical requirements must be current throughout duration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 5687 or KINS 5687) and (ATHT 5443 or KINS 5443)

**ATHT 8300. Seminar in Athletic Training/Sport Medicine. 1 to 3 Credit Hour.**

This course is designed to provide the student with analytical skills and practical experiences relative to research as it applies to sports-related injuries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may be repeated for additional credit.

**ATHT 8343. Advanced Topics in Athletic Training. 3 Credit Hours.**

Through the use of current literature and content experts in the field, this three-credit course will provide advanced information regarding clinically relevant topics related to athletic training and sports medicine practice, geared towards the practicing clinician.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 8344. Rehabilitation Methods and Techniques for Sports-Related Injuries. 3 Credit Hours.**

This course is designed to provide the student with both the theoretical cases and some practical experience relative to rehabilitation therapy as it applies to sports-related injuries. Topics to be covered include manual muscle testing, goniometry, theories of pain and its management, and various therapeutic exercise modalities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 8348. Laboratory Techniques in Athletic Training. 3 Credit Hours.**

This is a 3-credit course specifically designed for students currently enrolled in the graduate Athletic Training program. This course will provide students with knowledge and application of selected laboratory instrumentation utilized in the athletic training division of the Biokinetics Research Laboratory. Topics include, but are not limited to, instrumentation used in testing of the following areas: pain threshold, strength, motion analysis, electromyography, postural control, and protein assays.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 8349. Cadaver Anatomy. 3 Credit Hours.**

This course is designed for students currently enrolled in the graduate Athletic Training Education program. The course will provide students with knowledge and application of gross human anatomy, injury pathomechanics, and evaluation. Topics include, but are not limited to, laboratory experiences in the following areas: skeletal, muscular, nervous, cardiovascular, and respiratory systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 8601. Research Appraisal and Clinical Application. 3 Credit Hours.**

This 3-credit hour online course will focus on critically reading current research related to the field of athletic training. Students will learn common research design and statistical methods, and be able to critically appraise current literature. Students will be able to identify and analyze trends in clinical practice with the goal of improving patient outcomes. This course will prepare students for their capstone experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Athletic Training.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 8602. Clinical Grand Rounds I: Lower Extremity. 3 Credit Hours.**

This online course will consist of clinical cases from the students and guest lecturers in the medical field. An evidence-based approach will be utilized to determine best practices and ways to improve patient outcomes for lower extremity athletic injuries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 8603. Clinical Grand Rounds II: Upper Extremity. 3 Credit Hours.**

This online course will consist of clinical cases from the students and guest lecturers in the medical field. An evidence-based approach will be utilized to determine best practices and ways to improve patient outcomes for upper extremity athletic injuries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 8602 or KINS 8602)

**ATHT 8604. Evidence Based Decision Making in Athletic Training. 3 Credit Hours.**

This 3 credit hour online course will consist of defining evidence-based practice, including concepts of reliability, accuracy, predictive validity of clinical procedures, and outcome measures. Students will have the opportunity to apply evidence-based decisions to case-based scenarios, and critically evaluate decisions of peers. Students will be required to create an online clinical evidence-based continuing education course proposal according to the Board of Certification guidelines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Athletic Training.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 8601 or KINS 8601)

**ATHT 8611. Leadership and Cultural Considerations in Athletic Training. 3 Credit Hours.**

This 3 credit hour online course is an interdisciplinary course that utilizes case scenarios to discuss issues involving leadership, cultural competence, and ethical decision-making by health care team members.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ATHT 9601. Capstone in Athletic Training. 6 Credit Hours.**

The 6 credit hour capstone project is the culminating experience for the Doctor of Athletic Training program. It is completed under the mentorship of a research committee and integrates knowledge, skills, and abilities accrued throughout the program. The project will be founded in evidence-based practice and integrate current peer-reviewed research, patient population characteristics, and interdisciplinary provider expertise. The results of this project (e.g., literature review and critically appraised topics papers) will be submitted for presentation and/or publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ATHT 8343 or KINS 8343)

## Basic Core Medical Science (BCMS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**BCMS 5003. Fundamentals of Biochemistry. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Bioengineering (BIOE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**BIOE 5278. Cardiac Devices. 3 Credit Hours.**

This course will describe the structure, function and control of the cardiovascular system and its quantitative modeling. We will cover the functional organization of main elements within cardiovascular system including and interfacing systems, such as renal and respiratory systems. We will go through the major electrical signals, neurological and endocrine controls, which regulate function of the cardiovascular systems. Students will learn about pacing signals generated naturally in the heart and synthesized by electronics. Design considerations and indications for use of various devices to directly or indirectly affect heart function.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5301. Biosignals. 3 Credit Hours.**

This course offers a deep overview of the signals in the Biomedical fields. Signals are studied in several modalities, including time frame, frequency frame, and statistical frame. A deep analysis of filters and analysis tools is included together with some basic techniques of storing and pattern interpretation techniques. Furthermore, the course gives to the student the necessary knowledge to realize a complete Data Acquisition, Analysis and Logging using LabView as a tool. The laboratory activities include the development of a complete system to do acquisition, analysis, report and logging of data incoming from sensors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5311. The Entrepreneurial Bioengineer. 3 Credit Hours.**

This course provides a practical overview of all stages of development of medical devices in regenerative medicine, from idea to launch of a company and commercialization of the product into international markets to address unmet medical needs. We will review the initial idea, based on an unmet medical need, review issues of intellectual property creation, determination of target markets, pre-clinical and clinical development, and different regulatory pathways leading to product approval and market introduction. We will discuss issues of company formation, financing and management, as well as target markets and avenues towards revenue generation. Note: Prior to fall 2017, the course title was "Entrepreneurial Studies in Regenerative Medicine - From Idea to Medical Practice".

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5321. Biosensors. 3 Credit Hours.**

This course offers an in-depth overview of several sensors used in the Biomedical Fields. The sensors are analyzed from an engineering point of view going from the physical principles to the necessary filtering and linearization studying the characteristics of output signals. The course also gives the student the necessary basis for Data Acquisition using LabView as a tool. The laboratory activities include the connection of sensors, the study of amplification, linearization and interpretation of data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5333. Applied Biospectroscopy. 3 Credit Hours.**

This course introduces the basics of light propagation in tissue and other turbid media, vibrational spectroscopy, absorption and fluorescence, and emerging spectroscopic applications. Emphasis is on applications for assessment of biomolecules, engineered tissues and clinically-relevant analyses including musculoskeletal disease and cancer diagnosis. Multivariate analyses for complex spectral data sets will also be introduced.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5421. Capstone Elective: Bionanotechnology. 3 Credit Hours.**

This course is intended for graduate students interested in acquiring knowledge involving nanometer-sized objects frequently utilized within the biomedical sciences and engineering areas. The aim of the class is to introduce fundamental concepts critical in the design, preparation, analysis, and usage of bionanotechnology (or nanobiotechnology) and its multiple bottom-up and top-down approaches. Multiple nanomaterials categories, such as nanoparticles, nanotubes, biomacromolecules, synthetic polymers, and self-assembled structures, will be covered in detail along with their applications.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Bioengineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**BIOE 5431. Neuroengineering. 3 Credit Hours.**

This course will teach students how signals are generated and propagated in neurons and neuronal circuits, and how this knowledge can be utilized to engineer devices to assist people with neurologic disease or injury. The functions of neurons as discrete elements and as parts of neuronal assemblies will be examined; generator and action potentials; conduction in nerve fibers and across synaptic junctions; analysis of sensory and neuromuscular systems; EEG and EKG waveforms. At the completion of the course, students will have gained a fundamental understanding of neural interface/prosthetics design parameters from basic neural physiology to models of neural mechanisms. We will also review advanced neural interfaces currently being developed. The course will end with coverage of selected frontiers of neuroscience, including neurogenetic techniques, viral methods, and optogenetics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5441. Biomechanics. 3 Credit Hours.**

This course will provide an integrative and multi-scale understanding of biomechanics that spans from tissues, to organs, to the dynamics of an intact, running body. Foundational topics will include muscle mechanics, skeletal mechanics, gait and whole body dynamics. The course will then move on to cover selected topics at the forefront of applied biomechanics including clinical biomechanics and the design and optimization of prosthetic limbs. Finally, frontiers in neural-interfacing for prostheses and rehabilitation, including optogenetics and other emerging areas affecting biomechanics, including robotics and robotic exoskeletons, will be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Engineering.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5451. Biomedical Imaging. 3 Credit Hours.**

This course focuses on principles of diagnostic radiological imaging physics, including X-ray, computed tomography, and nuclear medicine, as well as optical imaging, ultrasound and magnetic resonance imaging modalities. The interaction of these modalities with tissues and detectors to produce useful image contrast will be presented, and students will gain an understanding of the basic physics of image acquisition and algorithms for image generation. Signal and noise characteristics, image quality and image reconstruction algorithms will also be covered. Image processing through MATLAB programming will be covered in class and in assignments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5461. Principles of Tissue Engineering. 3 Credit Hours.**

This course will introduce fundamental concepts of tissue engineering and regenerative medicine, focusing biomaterials used for scaffolds, mechanisms of cell-biomaterial interactions, biocompatibility and foreign body response, cellular engineering, and tissue biomechanics. Principles of cell/developmental and stem cell biology will be introduced, which will enable the students to apply a multidisciplinary approach to engineering select tissues and organs, such as the musculoskeletal system, cardiovascular tissues, the nervous system, and to design artificial organs. These topics will also be discussed in the context of scale-up, manufacturing, ethical and regulatory concerns. Note: Prior to fall 2017, the course title was "Principles of Tissue and Regenerative Engineering."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5471. Mechanobiology. 3 Credit Hours.**

Mechanobiology is an emerging interdisciplinary field that focuses on the role of mechanical cues in governing cellular behavior. This course will address how a cell utilizes its adhesions to neighboring cells and to the surrounding extracellular matrix to sense external forces and furthermore, how these forces are transduced within the cell to alter cellular behavior and regulate tissue architecture. This course will also discuss how the extracellular matrix influences cellular behavior during development, health, and disease. Additionally, this course will also discuss the various tools and techniques developed to probe cytoskeletal structures, molecular motors, plasma membranes, cellular adhesion structures, and matrix proteins that pushed the field of mechanobiology forward. This course will culminate in integrating all new foundational knowledge in mechanobiology to propose new studies manipulating molecular, cellular, or tissue-level behavior for applications in diverse fields such as regenerative engineering, wound healing, or cancer diagnostics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BIOE 5721 (may be taken concurrently)

**BIOE 5500. Special Topics in Bioengineering. 3 Credit Hours.**

An emerging or advanced area of bioengineering research will be covered. Topics vary by semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 5501. Regenerative Engineering. 3 Credit Hours.**

This course is a continuation of fundamental concepts introduced in Principles of Tissue and Regenerative Engineering focusing on developmental biology used in tissue engineering and regenerative medicine. Principles of cell development/biology, cell-cell interactions, signal transduction, and stem cell biology will be discussed with applications to regenerative medicine. These topics will also be discussed in the context of scale-up, manufacturing, ethical and regulatory concerns.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Bioengineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BIOE 5461 and BIOE 5721.

**BIOE 5555. Biophotonics: Seeing is Believing. 3 Credit Hours.**

Only a small portion of the world around us is visible to the human eye. With revolutionary microscopy developments, nowadays there are ways to visualize drug effects, forces, viral infection or cancer metastasis, or use light to control biological processes. Once we see biology happen, the result is not just a pretty image. We can use machine learning and artificial intelligence (AI) to improve resolution and quantify the imaging data. In this course students will learn how light can be used to visualize and manipulate biomaterials at molecular, cellular and tissue scale. The first part of the course will provide a review of light and optics. We will cover typical hardware used for imaging in biology, such as light sources, objectives and detectors used to generate images. The second part of the course will include hands-on fluorescent microscopy, the main tool for imaging in life sciences, and it will include imaging of cell cultures in 2D and 3D and tissue sections. We will use typical image processing tools, including Fiji, Matlab and selected Python plugins, and learn how to implement AI tools to improve images and imaging data. Final sessions will include presentations on specialized techniques by students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5600. Bioengineering Graduate Seminar. 0 Credit Hours.**

Required seminar for bioengineering graduate students. These seminars include speakers from academic and professional backgrounds for both scientific development and professional development. Students will be graded on participation of at least 70% of the bi-weekly seminars throughout the duration of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Bioengineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 5719. Introduction to Bioengineering. 3 Credit Hours.**

This course offers an introduction to biomedical engineering, a diverse and evolving field that integrates engineering principles, life sciences, clinical medicine, research and engineering design, with the overall goal of improving health care and quality of life. Professors with expertise in specific fields of biomedical engineering will present lectures and discussions on a broad range of topics, including tissue engineering and regenerative medicine, biomaterials, biomechanics, bioinstrumentation, biomedical imaging and optics, and signal processing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5721. Cell Biology for Engineers. 3 Credit Hours.**

This course introduces biological concepts in modern cellular and molecular biology to engineering students. Topics will include the chemical composition of cells, bioenergetics and metabolism, structure and function of the plasma membrane, transport across membranes, the cytoplasmic membrane system, the extracellular matrix, interactions between cells and their environment, the cytoskeleton and cell motility, sensory systems, and cell signaling. In addition, an introduction to basic anatomy and physiology of vertebrates will include the skeletal system, muscle system, cardiovascular system, and nervous system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5737. Systems Physiology for Engineers. 3 Credit Hours.**

Systems Physiology is designed for graduate students majoring in engineering and for others interested in studying physiological processes from the molecular level to the organ/systems level. Among the topics covered are: scaling, respiration, circulation, cardiac process, renal function, muscle function, neuromuscular junction, neural processes, and temperature regulation. The course stresses the application of energetic and informational principles to the study of the body.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5741. Biomaterials for Engineers. 3 Credit Hours.**

This course introduces engineering students to materials as they interact with biological systems, primarily in medicine. Topics will include a review of properties of materials, the classes of materials, tissues that come into contact with materials, the degradation of materials in the biological environment, the application of materials for specific uses, tissue engineering, and biomaterials standards and regulations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 5999. Research Experience in Bioengineering. 0 Credit Hours.**

Research Experience provides graduate students laboratory experiences/research practices prior to undertaking independent, directed, master project, master's thesis, or dissertation research. This course allows graduate students the opportunity to learn to use laboratory equipment, designing and carrying out an experiment(s), collecting preliminary data, field experiences, and participation in laboratory meeting, etc. with faculty which may lead to identifying a faculty mentor. The course will be graded as Pass or Fail. The Research Experience is a non-repeatable course. After the completion of this Research Experience course, students will need to be enrolled in independent study, directed research, master's research, master's thesis, dissertation proposal, or dissertation if they continue in an active research program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOE 9182. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 9282. Independent Study II. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 9991. Directed Research. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 9994. BioEngineering Preliminary Examination Preparation. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 9995. BioEngineering Project Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 9996. BioEngineering Thesis Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 9998. Bioengineering Pre-Dissertation Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOE 9999. BioEngineering Dissertation Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Biology (BIOL)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**BIOL 5101. Evolution. 3 Credit Hours.**

A lecture and discussion course for upper-level science majors and graduate students. Topics covered include Darwinism and neo-Darwinian theory, including adaptation, natural selection, sexual selection, and speciation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5111. Genomics in Medicine. 3 Credit Hours.**

The completion of the Human Genome Project in 2003 began a revolution in the treatment of human disease. More than 10 years later, the promise of personalized genome-guided medical treatment is becoming reality. This course will explore how genomic information has enhanced our understanding of human genetic variation and disease susceptibility. Students will develop familiarity with main areas in genomic medicine through lectures from intra- and extramural experts, and they will be involved in classroom discussions. Students at the graduate level will complete an independent project focused on a particular disease topic, integrating literature review with new analyses of published data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5112. Fundamentals of Genomic Evolutionary Medicine. 3 Credit Hours.**

Modern evolutionary theory offers a conceptual framework for understanding human health and disease. In this course we will examine human disease in evolutionary contexts with a focus on modern techniques and genome-scale datasets. We ask: What can evolution teach us about human populations? How can we understand disease from molecular evolutionary perspectives? What are the relative roles of negative and positive selection in disease? How do we apply evolutionary principles in diagnosing diseases and developing better treatments? Students will conduct case studies of a variety of diseases and phenotypes in a group setting. Students at the graduate level will complete an independent research project and assume leadership roles in group presentations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Engineering, College of Public Health, Medicine, Lewis Katz School, Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5114. Evolutionary Ecology. 3 Credit Hours.**

In this course we will explore the interface of ecology and evolution. The field of evolutionary ecology deals broadly with questions such as: What are the ecological causes of evolution? How do ecological interactions shape the evolution of traits and origination (or extinction) of species? How does evolutionary history shape species interactions and community structure? How might evolution influence community or ecosystem processes? The class will cover fundamental theories and approaches used to address questions in evolutionary ecology, including molecular tools, modeling, manipulative field studies, and laboratory- or field-based common garden studies. Students will be engaged through a combination of lectures, inquiry-based activities, and small group discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5128. Genomics and Infectious Disease Dynamics. 3 Credit Hours.**

Events such as the emergence of avian flu have increased public awareness about the need for incorporating ecology and evolution in decision-making processes that involve infectious diseases. It is evident for the public health community that molecular information, together with concepts from ecology and evolutionary biology, allows for testing of hypotheses and exploration of scenarios that otherwise could not be investigated by traditional epidemiological approaches. Understanding the ecological and evolutionary dynamics of infectious diseases requires the integration of information across organizational levels at various temporal and/or spatial scales. This requirement, together with novel molecular evolution, genomics, and mathematical modeling approaches, has positioned research on Genomics and Infectious Diseases Dynamics at the forefront of Public Health Genomics. The goal of this class is to discuss some of the biological processes leading to the emergence and re-emergence of infectious diseases stressing on evolutionary concepts within an epidemiological context. Basic concepts will be provided by the instructor as part of formal lectures. Our general objective (integrating evolutionary biology into epidemiology) will be fulfilled by discussing research articles. Such discussions will take place during the second half of the semester. "Emerging" perspectives such as One Health and Public Health Genomics will be integrated into the lectures and discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5131. Topics in Bioinformatics. 3 Credit Hours.**

This course will be a keystone required course for all incoming students in a Bioinformatics Ph.D. program. Bioinformatics is a rapidly expanding research area at the intersections of biology, chemistry, mathematics/statistics, and computer science. The shared theme of this broad discipline is the application of sophisticated computing technologies to address questions on typically massive amounts of biological data. Because of the dynamic and broad nature of the field, a course is needed that will introduce new students to the breadth of the field while at the same time introducing topics at a level of depth and rigor appropriate for a Ph.D. program. This will be a team taught course, with one coordinator and up to seven research-active instructors. The course would consist of seven modules, each two weeks in length. Every year, the coordinator will identify faculty and topics so as to present a diverse cross-section of cutting-edge Bioinformatics. An important goal of this course is that it will introduce students to a broad sample of the faculty who are active in the Bioinformatics Ph.D. program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5225. Evolutionary Genetics Genomics. 3 Credit Hours.**

This class covers fundamental principles of population and comparative genetics with special attention given to recent advances in genomics. The scope of the class ranges from understanding variation at the population level to addressing species-level questions. Topics covered include classical population genetics, quantitative genetics, comparative genomics, phylogenomics and speciation. Lectures, assignments and discussions will explore theoretical and recent empirical advances.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5226. Innovative Biomodels and Concepts. 3 Credit Hours.**

The aim of this course is to familiarize students with current concepts, models, and cutting-edge technologies applicable in different bioindustries. The scope of topics ranges from the implementation of discoveries stemming from molecular genetics, cell biology and nanotechnology in different industries to integration of omics techniques in personalized medicine, drug discovery and pharmacovigilance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5227. Biomarkers and Biotargets: Research and Commercialization. 3 Credit Hours.**

This course focuses on the evolution of biomarker and biotarget research, with emphasis on biomarker validation and biotarget druggability. The students will analyze real-life examples of biomarkers and biotargets in medicine, drug development, and environmental science. The formation of therapeutic target databases and development of multi-target agents will be critically evaluated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5228. Epigenetics, Genetics: Applications in Drug Design and Drug Response. 3 Credit Hours.**

This course focuses on applications of current epigenetics knowledge in health industries. Special emphasis is on epigenetic and genetic testing in clinical settings, epigenetic and genetic determinants of drug response as well as drug- and environment-induced modulation of epigenetic status.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5229. Systems Biology: Principles and Applications. 3 Credit Hours.**

This course provides an overview of Systems Biology technologies and the scientific challenges in applicability of system biology paradigms in the analysis of biological processes. Topics covered include the use of genome-scale in silico models and dissecting transcriptional control networks. By successfully completing this course, the students will obtain background on theoretical and modeling techniques, and software platforms for Systems Biology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5232. Behavioral Genetics. 3 Credit Hours.**

This course is an introduction to the interdisciplinary field - behavioral genetics - that combines behavioral sciences and genetics and unifies the long-standing debate on what underlies complex human behavior: "nurture" or "nature." This course will discuss the genetic approaches used to dissect out the genetic determinant of complex human traits. For example, students will learn about genes that influence learning and memory, intelligence (IQ), cognitive disabilities, personality disorders, psychopathology, antisocial behavior, substance abuse, and sexual orientation. In addition, the interplay of environment and genetic factors that create individual differences in behavior will be explored. Because this field represents the intersection between what is known and what might be known in the future about complex and potentially controversial behaviors and characteristics, students will be encouraged to discuss contemporary ethical issues regarding human behavior in realm of the scientific evidence presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5233. Effective Dissemination of Bio-discoveries through Traditional and New Media. 1.5 Credit Hour.**

The students will learn contemporary methods of effective dissemination of research findings and concepts to professional and lay audiences. Current real-life findings will be presented through slide and video development, press releases, and the use of social media. In addition, the students will learn the ways to communicate scientific data through abstracts, posters, and papers and will critically analyze the content and style of selected scientific material. Furthermore, different types of funding proposals will be reviewed and grant development will be practiced.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5234. Bioinnovation Seminar. 1.5 Credit Hour.**

This course includes lectures and seminars on current topics in bioinnovation presented by experts in different disciplines and it will include seminars at the Fox School of Business and Management. By successfully completing this course, the students will obtain up-to-date knowledge of bioinnovative models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5235. Milestones in Clinical Translation of Biodiscoveries. 1.5 Credit Hour.**

The goal of this course is to familiarize the students with clinical trial design and principles of pharmacovigilance. Topics will include clinical trial phases and examples of clinical trial design for selected biologic drugs. Case studies of drug safety-driven FDA decisions will also be evaluated. The comparison between regulatory requirements of the U.S. and international agencies will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5236. Bioadvanced Screening in Health Disparity. 1.5 Credit Hour.**

This course focuses on the effects of nutrients, bioactive food components and environment on public health, medical treatments and applications for improving human health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5237. Virtual Reality in Bioindustry and Medicine. 1.5 Credit Hour.**

The goal of this course is to provide the students with a background on Virtual Reality and its applications in medicine, laboratory research, training and education in bioindustry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5239. Dissemination of Biodiscoveries and Virtual Reality in Medicine. 3 Credit Hours.**

The students will learn contemporary methods of effective dissemination of research findings and concepts to professional and lay audiences. Current real-life findings will be presented through slide and video development, press releases, and the use of social media. Furthermore, this course will provide the students with a background on Virtual Reality and its applications in medicine, laboratory research, training and education in bioindustry.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5241. Genomics and Evolutionary Biology of Parasites and Other Dependent Species. 3 Credit Hours.**

All known multicellular organisms harbor diverse assemblages of dependent species, many of which are considered parasites or pathogens. Yet, in spite of a growing awareness of the importance of dependent species in biodiversity and medicine, many studies are limited to assessing the consequences to their hosts. The goal of this seminar is to discuss some of the biological processes leading to the diversity of dependent species and their functional/evolutionary relationships with their hosts. This general objective will be fulfilled by discussing research articles on the genomics and evolution of dependent species, many of them considered parasites or pathogens. Students are also expected to gain proficiency in writing scientific review papers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5254. Animal Behavior. 3 Credit Hours.**

This course will examine how animals behave, and investigate the proximate (neurological and developmental) and ultimate (functional and evolutionary) explanations for these behaviors. The ecological and evolutionary processes that shape animal behavior will be examined through the study of classic theories and major principles of animal behavior, including a weighing of the experimental and observational evidence for each idea. Concepts will be illustrated with examples from a wide range of taxonomic groups of animals in diverse ecosystems, and emerging theories in animal behavior will be discussed. We will conclude with applications of animal behavior for conservation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5275. Ecology of Invasive Species. 3 Credit Hours.**

Species that are transported by humans from their native range and successfully establish and spread in a new environment are called invasive species. Invasive species can cause significant ecological and economic impacts and are a growing threat to native species and ecosystems across the globe. Recognition of this problem has led to a recent surge in research on invasive species and a better understanding of the ecology of invasions and approaches for improved prevention and control. Yet many challenges still hinder scientific and applied advancements in this emerging field. In this course we will investigate these challenges and the science of invasive species using interactive activities and student-driven projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5301. Cell Biology. 3 Credit Hours.**

Advanced knowledge in cell biology will be discussed. Topics include macromolecules, cell structure, cell motility, bio-membrane, endo- and exocytosis, nucleocytoplasmic transport, visualizing cells and macromolecules with advanced microscopy imaging. Current journal articles reporting recent developments in modern cell biology will be also covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5307. Conservation Biology. 3 Credit Hours.**

The Earth harbors an incredible diversity of species and communities, most still poorly understood by science. This biodiversity is essential to the functioning of natural ecosystems and provides a wide array of priceless services to people today and a treasure of benefits for the future. Yet human threats to biodiversity have led us to the brink of the sixth major extinction event in Earth's history. Which populations, species, communities, and ecoregions are most diverse? Which are most threatened, and by which human activities? What is the contribution of biodiversity to human livelihoods? What does the science suggest is needed to conserve biodiversity? How might this best be done given social, economic, and political realities? These questions and more will be examined in this course, focusing on the key principles of conservation biology and the application of those principles to local, national, and international examples.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5311. Herpetology. 4 Credit Hours.**

Herpetology Reptiles and amphibians comprise nearly 7,400 species and can be found on every major and minor landmass in the world except Antarctica. This course will provide a broad, evolutionary survey of the major groups of reptiles and amphibians ("herps"). We will cover topics about their basic biology, including anatomy, physiology, ecology, behavior, and conservation. The laboratory will emphasize taxonomic characters and identification of living and preserved specimens, with emphasis on species found in North America. Additionally several field trips (conducted during lab hours and spring break) will reinforce course material through hands-on experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5312. Biostatistics. 3 Credit Hours.**

Biostatistics is an important part of the research activities related to biological and medical issues. Statistics is used to analyze phenomena with random properties and is often essential to draw the right conclusions based on a data set. The course will be designed to cover different statistical methods for data analysis mainly applied to medical and biological problems. Advanced undergraduate and graduate students with interests in medicine and biomedical research will benefit most from the course. However statistical methods that can be applied to behavioral science and ecology will also be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5321. Plant Community Ecology. 3 Credit Hours.**

This class focuses on fundamental principles in community ecology as they relate to plant systems. The scope of the class ranges from plant-environment interactions and species interactions, to the relationship among communities at larger spatial scales. Lectures and small group discussions will also highlight theoretical and empirical advances made in ecology through classic and contemporary studies of plant communities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5322. Biology of Plants. 3 Credit Hours.**

This course examines current knowledge of higher plants, with an emphasis on Arabidopsis and maize. Topics include plant reproduction, self-incompatibility, polyploidy in plants, sex chromosomes in plants, chloroplast structure and function, light and dark reaction of photosynthesis, nitrogen fixation, phytochromes, DNA and histone methylation and epigenetics, embryonic pattern formation in plants, chemical signaling in plants, leaf morphogenesis, flower development, and stem cell populations in plants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5323. Global Change Science: Analytics with R. 3 Credit Hours.**

Learn how researchers use data to tackle global problems such as climate change, mass extinction, pandemics, and poverty. Explore interdisciplinary data, from economics to public health, and learn a marketable skill: R, an intuitive computer language. The course is project based, no prior coding experience is necessary, and no tests are given. Instead, student assessment is on project progress and communication of a global change problem of their choice. The most successful students leave class with the quantitative skills to go out and solve our most pressing problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**BIOL 5325. Research Techniques in Molecular Biology. 3 Credit Hours.**

Instruction in the techniques used in modern molecular biology and molecular genetics. This course takes a problem-oriented approach toward teaching the methods of DNA and RNA analysis that are used in determining the structure and function of genes. Practical experience in the preparation of DNA, modern cloning methods, restriction enzyme mapping, hybridization analysis, DNA sequencing, and PCR techniques will be provided. Students will carry out a research project during the course. NOTE: Biology 3324 is highly recommended, but not required. Also note: Prior to Spring 2017, the course title was "Recombinant DNA Techniques."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5335. Polar Biology - Life at the Extremes. 3 Credit Hours.**

"Polar Biology - Life at the Extremes" is an introduction to polar environments and the biology of aquatic and terrestrial organisms adapted to live in the Arctic and Antarctic. Similarities and differences between the poles as well as anthropogenic impacts on these remote environments will be addressed. Comparisons to other extreme environments will be included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5337. Comparative Biomechanics. 3 Credit Hours.**

An overview of biomechanics with emphasis on locomotion. Students gain a working knowledge of the breadth of biomechanical study ranging across organismal and environmental scales.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5338. Epigenetics. 3 Credit Hours.**

The term "epigenetics" describes a heritable effect on chromosome or gene function that is not accompanied by a change in DNA sequence. Recent findings suggest an important role of epigenetics in both normal development and cancer. This course provides an overview of the field and examines selected phenomena in several eukaryotes, mechanisms regulating these effects, and their phenotypic consequences when normal regulation is lost. Topics include gene regulation through chromatin modification (acetylation, methylation), genomic imprinting, mechanisms of silencing (including small interfering RNAs), and the role of epigenetics in human diseases and cancer.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5358. Cellular/Molecular Neuroscience. 3 Credit Hours.**

The course will focus on the molecular and cellular basis of neurological processing. The fundamentals of action potential generation, synaptic and receptor potentials generation and neuron-neuron communication will be discussed. The contemporary understanding of sensory processing will be covered in great detail with a particular focus on molecular sensors of light, sound, odorants, taste and touch and the signal transduction pathways that underlie the five senses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5361. Molecular Neuropharmacology. 3 Credit Hours.**

In this course we will examine how drugs interact with the nervous system. We will focus specifically on the cellular and molecular actions of drugs on synaptic transmission, as a mechanism for understanding the structure and function of the synapse. In addition, we will discuss how toxins and venoms affect synaptic transmission in nature as well as how they have been (and continue to be) used as research tools. We will study the neural substrates of drug action and the sequence of events from how a drug binds initially to its molecular target(s), the resulting changes in the function of its target, the influence of these changes on biochemical networks in neurons, the subsequent alterations in neuronal output, and in the circuit, including non-neuronal cells. Students will be able to appreciate the progress in the discovery of drugs used to treat in the clinic complex behaviors as well as major neural disorders (neuroinflammation, pain, migraine, sleep, neurodegeneration, addictive disorders, schizophrenia, etc.). In addition, we will learn about the process of drug approval (preclinical, clinical trials, drug monitoring, and FDA's role).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5366. Stem Cell Biology. 3 Credit Hours.**

The purpose of this course is two-fold. The first is to present the developmental biology of stem cells, with an overview of the various types of stem cells that exist and an emphasis on embryonic stem cells. The overview will include the important functional differences between embryonic, hematopoietic, and adult stem cells as well as the differences in their biomedical potentials. Techniques such as somatic cell nuclear transfer (SCNT) and other methods for the derivation of stem cell lines will be outlined so that differences that may seem subtle at first glance are clarified. The second purpose is to look into the larger debate on human embryonic stem cell research while continually drawing connections to the established fields of bioethics, politics, and philosophy. The course will ground the issues by looking at the history of the debate over the embryo, with careful attention paid to the language used in arguments. An exploration of important social, ethical, political, and economic issues and how they arose with respect to the stem cell debate will round out the remainder of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5389. Field Research in Community Ecology. 3 Credit Hours.**

Many fundamental advances in community ecology have emerged from creative, well-designed field studies in natural ecosystems. Field research is therefore a cornerstone of contemporary community ecology. Through this course taught at Temple's Ambler Campus, students will gain hands-on experience designing and conducting field study research in community ecology. While some activities will be in a classroom, most field study activities will be held outdoors, in the natural environments around Ambler Campus.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5403. Genomics. 3 Credit Hours.**

This course will cover the process of gene inheritance and descriptions of genome structure, as well as a discussion of gene content and function across lineages. Students will learn about genome-related technologies, including genome sequencing. They will also learn about how genomes vary across species, as well as the forces driving these evolutionary changes. Students will complete quizzes and exams to demonstrate understanding of the information present in genomes and the processes that drove it.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5411. Structural Bioinformatics I. 3 Credit Hours.**

This course will cover the basic concepts of protein structure analysis, with focus on database searching and molecular modeling techniques. A broad qualitative overview of macromolecular structure and protein folding will be provided before addressing the issues of sequence alignment, secondary structure calculation, and tertiary structure prediction. The course will also cover few selected advanced topics such as prediction of quaternary structure, Hidden Markov Models, and other approaches for building probabilistic models of sequence ensembles. Computer-based activities will allow students to develop a strong familiarity with molecular visualization software and web-based tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5416. Tropical Marine Biology: Belize. 4 Credit Hours.**

An introduction to the largest coral barrier reef in the Atlantic Ocean. Course lectures begin at Temple (approximately Dec 29-Jan 31; holidays excluded) followed by a week of lectures, field trips and field or laboratory projects in Belize. Lectures include coral biology, reef geology and ecology, coral reef microbiota, food chains and nutrient transfer in coral reefs, reef community organization, the biology of reef fishes, commensal and symbiotic interactions of reef organisms, and other appropriate topics. Group student team projects and lectures are required. Note: Additional requirements include cost of air travel to a foreign country between fall and spring semesters, a current passport, and snorkeling equipment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5427. Immunology. 3 Credit Hours.**

The purpose of the Immunology course is to provide a comprehensive overview of the immune system that in its normal function protects each of us from the harmful effects of microbial invaders. The lectures will describe the general properties and development of immunity, the condition of being protected from infection by microorganisms or the effects of foreign molecules. They will provide systemic coverage of immune responses to viruses, bacteria, protozoa and roundworms as well as the practical aspects of vaccine development. Additional lectures will include a description of various types of primary immunodeficiencies, most prevalent autoimmune disease and cancer.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5428. Virology. 3 Credit Hours.**

The role of viruses in human diseases, and their potential as tools for research and clinical interventions. The course will focus on virus-induced diseases in man including polio, rabies, hepatitis, herpes, and influenza; recently discovered viruses such as HIV and HTLV-1 will also be studied. Virus-host interactions and the mechanisms involved in disease progression, therapeutic strategies, and vaccines, strategies for viral entry, evasion of the immune system, transmission, and the subversion of host-cell machinery will be emphasized. Potential uses of viruses as vector for gene therapy of genetic disorders, cancers, and infectious diseases will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5429. Developmental Genetics. 3 Credit Hours.**

The role of genes in the determination and differentiation of eukaryotes. Emphasis on the regulation of gene function and on the genetic and molecular interactions which control the processes of development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5433. Advanced Techniques in Microscopy. 3 Credit Hours.**

This course will provide a survey of modern techniques in microscopy. Students will acquire a thorough grounding in general principles of optics and conventional microscopy, and learn the theory of many methods current in biology and medicine, fluorescence, confocal microscopy, video microscopy, and digital image processing and analysis. Note: This course includes extensive laboratory experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5436. Freshwater Ecology. 4 Credit Hours.**

The interrelationships between biological, chemical, and physical factors in freshwater environments. Lectures and laboratories address general ecological principles (population dynamics, community structure, energy flow, and nutrient cycling) as they apply to plants and animals in lakes, ponds, streams and wetlands. Note: Students are required to participate in up to two field trips, one of which includes weekend travel.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5452. Systems Neuroscience. 3 Credit Hours.**

A comparative survey of vertebrate and invertebrate nervous systems intended to acquaint the student with their structure, function and development at several levels of complexity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5454. Neurological Basis of Animal Behavior. 3 Credit Hours.**

An exploration of the relationship of neural activity and connectivity to behavior. Topics include motor control, object recognition and learning. Examples from both vertebrate and invertebrate species. Analytic and synthetic approaches.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5456. Organization and Development of the Nervous System. 3 Credit Hours.**

This course covers developmental, anatomical and integrative aspects of the nervous system. The relationship of form to function will be studied in a variety of systems both invertebrate and vertebrate. The course is intended to complement Neurobiology 352/452 so that students will have a perspective on neuroscience ranging from the molecular to the systems level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5464. Biochemistry of Embryogenesis. 3 Credit Hours.**

This course will compare and contrast key biochemical mechanisms of embryonic development in a variety of model organisms ranging from humans to plants. We will examine the roles of enzymes, peptides, small RNA molecules and chromatin structure during embryogenesis. Topics will include micro RNAs, modification of DNA structure, and effects of mutation on enzyme activity. These basic principles will then be applied to subjects such as cell communication, stem cells, and cloning. Course material will be drawn from the experimental literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5465. Mammalian Development. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5466. Contemporary Biology. 3 Credit Hours.**

This course is typically offered in Fall and Spring.  
Advanced discussion of selected topics.

This course is repeatable for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 5467. Endocrinology. 3 Credit Hours.**

Broad coverage of "chemical messengers", occurrence, biochemistry, and physiology. Vertebrate endocrinology with minor treatment of invertebrates and plants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5469. Molecular Biology. 3 Credit Hours.**

A background knowledge of biochemistry and basic genetics at the undergraduate level is desirable. Structure, function and interaction of proteins and nucleic acids; building macromolecular complexes; techniques in molecular biology; introduction to molecular genetics and genomics; DNA replication and repair; transcription at the level of both genes and genomes; role of chromatin in gene regulation; non-coding RNAs; RNA processing; RNA interference; protein synthesis and its regulation; introduction to proteomics; transposons; regulatory proteins in eukaryotes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5471. Cell Proliferation. 3 Credit Hours.**

Discussion of cell proliferation and its control; assay systems, comparisons of proliferating cells with nonproliferating cells, controls of cell division and how that control is modified in proliferative diseases such as cancer, the relationships between proliferation and differentiation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5474. Physical Biochemistry. 3 Credit Hours.**

The course covers those aspects of computer simulation of molecular dynamics, quantum mechanics, and statistical mechanics of use to biochemist and biologist interested in molecular modeling. The course is intended to be computer intensive.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5475. General Biochemistry I. 3 Credit Hours.**

Properties of water (pH and buffers); metabolism of carbohydrates, amino acids, fatty acids, and phospholipids properties of biomacromolecules proteins, and nucleic acids; DNA structure and replication; protein synthesis; energy generation; catalysis and control of enzymatic activity and interrelationships among the metabolic pathways.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5476. General Biochemistry II. 3 Credit Hours.**

Emphasis on the biochemical reactions in various metabolic pathways. Biosynthesis and degradation of carbohydrates, lipids, proteins and amino acids. Regulation and integration of metabolic pathways. Bioenergetics and oxidative phosphorylation. Signal transduction. Transcription, translation and their control.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5479. Biotechnology. 3 Credit Hours.**

This course is designed to survey current issues in technologies including therapeutics and diagnostics, and to examine consequences of developments in this area. The course is designed in a Problem Based Learning format, where students research critical areas and provide oral and written reports for other members in the class. The course is organized by topics including Concepts in Genetics, Cloning and Ethics, Gene Therapy, Prenatal Diagnosis, Gene Therapy for Cancer, Cell Replacement Therapy, Genomics and Proteomics, Vaccines, Forensics, Plant Biotechnology, and Instrumentation. At the end of the course, each student makes a formal presentation on a specific advance in biotechnology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5501. Analytical Biotechnology. 1.5 Credit Hour.**

This course provides a comprehensive survey of current techniques of biomolecule measurement and analysis using biochemical testing as the basis of measurement in a biotechnology laboratory. The detection, purification, and characterization of biomolecules (proteins, nucleic acids, carbohydrates, and lipids) are major goals in biotechnological research and development. Specific biomolecules serve as markers for the accurate and sensitive diagnosis of disease, and afford drug targets for disease treatment. Biomolecules also can be indicators of harmful (or beneficial) environmental agents and conditions. New, highly sensitive and accurate analytical methods are now available for the detection of diverse biomolecules. Note: Biochemistry Majors who have completed CHEM 4375 or CHEM 4404 with a minimum grade of C may register for BIOL 5501 with permission from instructor.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5502. Microbial Biotechnology. 3 Credit Hours.**

Course covers use of microorganisms in biotechnology. Includes recombinant DNA methodology and application of these approaches to production of medicines and for environmental remediation. Synthetic biology and metabolic engineering will also be covered (theory and concepts).

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Engineering, Medicine, Lewis Katz School, Pharmacy, Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5503. Biotechnology Laboratory I. 3 Credit Hours.**

The biotechnology laboratory course is designed for students in the Professional Science Master's Program in Biotechnology. Students in the program will be recruited from Science, Technology, Engineering and Math (STEM) undergraduate majors and this hands-on course is designed with this understanding. The course will introduce students to some of the basic laboratory approaches used in the analysis of biologically-active environmental contaminants and in the synthesis of new and existing drugs. The first part of the course will emphasize molecular biological tools useful in drug design and contaminant analysis. The second part of the course will emphasize the chemical analysis of biologically-active compounds. The course will be problem-oriented with small team participation. The course will prepare students for a research project as part of the requirements for completion of the Professional Science Master's in Biotechnology.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5504. Biotechnology Laboratory II. 3 Credit Hours.**

The biotechnology laboratory course is designed for students in the Professional Science Master's Program in Biotechnology. Students in the program will be recruited from Science, Technology, Engineering and Math (STEM) undergraduate majors and this hands-on course is designed with this understanding. The first part of the course will introduce students to microorganisms relevant to human and environmental health, for example pathogenic organisms as well as antibiotic-producing organisms. The second part of the course will focus on genomic and proteomic techniques and the use of bioinformatics in drug design, bioremediation and related challenges. The course will be problem-oriented with small team participation. The course will prepare students for a research project as part of the requirements for completion of the Professional Science Master's in Biotechnology.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5505. Ethics Regulation and Policy in Biotechnology. 3 Credit Hours.**

The Bioethics, Policy and Regulation course is designed for students in the Professional Science Master's Program in Biotechnology. This course will provide an understanding of ethical decisions, governmental regulations and policies in biotechnology. A case study approach will be used to provide a framework for discussions of policy and ethical decision making. Guest speakers will provide insights from legal and governmental perspectives on emerging and current biotechnology applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5506. Professional Development Seminar for PSM in Biotechnology. 1 Credit Hour.**

The PSM program prepares graduates for careers in biotechnology-related fields with a strong emphasis on skill areas that include management, policy and regulation in addition to scientific discovery. This course will provide students with career exposure through interviews with professionals in government and industry and will assist students in developing a career plan. Students will develop a white paper on the current state of Biotechnology based on new advances and challenges in the past year. Members of the advisory board will participate in facilitating the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BIOL 5501, BIOL 5503, and BIOL 5505.

**BIOL 5509. Computational Genomics. 3 Credit Hours.**

This is a course on the application of genome-related concepts to genome sequence data. Students will gain familiarity with both existing software and with basic programming (scripting) skills for problems in genomics. Further, students will come to understand the connections between standard computational and statistical approaches and their underpinnings in those fields increasingly dominated by genomic approaches. These include the fields of molecular evolution, population genetics, molecular genetics, molecular biology, and biochemistry. The course will be a hands-on computational lab course, with students working on problems and assignments in class using their laptop computers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BIOL 5403.

**BIOL 5511. Ethics in Bioinformatics. 2 Credit Hours.**

This course will examine the social, legal, and privacy issues of applying computational approaches to large datasets including those from personal genome projects. The class will expose students to variation-based approaches in genomics, policies and strategies to share genomic data, database management and security, open-access and open-source philosophies, the ethics of collecting, storing, and disseminating human data, and HIPAA, FDA, and IRB regulatory policies for health care professionals and bioinformaticians. Students will be given the opportunity to discuss contemporary case studies, in addition to NIH-sanctioned online training modules (Responsible Conduct in Research).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5514. Biological Models in Python. 3 Credit Hours.**

This course provides an introduction to the field of computational biology by implementing biological models in the Python programming language. In addition to coverage of the basics of the Python language, topics will include: phylogenetic tree models, implementation of Markov models for biological problems, data structures and algorithms for the analysis of biological sequences, and the use of popular Python modules relevant for biological modeling. Prior basic knowledge of evolutionary theory and of genetics/genomics is expected. Some prior scripting experience is helpful, but students are not required to have an extensive coding background. This is a hands-on computational lab course, with students working on problems in class using their laptop computers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5521. Nucleic Acid Technologies. 1.5 Credit Hour.**

This course provides a focused examination and analysis of the basic structures and properties of RNA and DNA; the enzymes that synthesize or modify these biomolecules; and biotechnological applications. The synthesis and purification of DNA and RNA will be reviewed along with detection methodologies, including enzymatic amplification, array analysis, and amplification-free (direct) approaches. Nucleic acid sequencing technologies, including the analysis of ancient or degraded DNA and emerging nanopore-based sequencing approaches, will be surveyed. Finally, the course will examine how the inherent ability of DNA and RNA to self-assemble can be harnessed to provide novel nanostructures with complex architectures, and that show promise in biomedical and biotechnological applications. Note: Biochemistry Majors who have completed CHEM 4375 or CHEM 4404 or BIOL 5501 with a minimum grade of C may register for BIOL 5521 with permission from instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5522. Introduction to Scientific and Regulatory Writing. 3 Credit Hours.**

This course introduces students to the two primary types of medical writing done by/for pharmaceutical and biotech companies. Specifically, students will learn how to research and write abstracts, posters, clinical reports and other research manuscripts, patient education materials, and slide kits. In addition, students will be introduced to the basics of strategic planning and consulting, including the creation of publication plans and meeting planning from a marketing perspective. Students will also learn the fundamentals of regulatory writing. Topics will include overviews of U.S. and international regulatory agencies, product life cycles, the conduct of clinical trials and reporting clinical trial results, and activities and documentation involved with submissions for marketing approval of treatments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5532. Introduction to Grant Writing. 3 Credit Hours.**

This course is designed for students who plan to enter professional careers requiring knowledge of grant writing. The course will teach students the mechanics of proposal writing and the political and social aspects of "grantsmanship" as they develop their skills in identifying sources of grant funding, doing useful research to support their applications, and tailoring their proposals to specific audience interests. There will be several short writing assignments, an exam, and an independent project. Students may also be asked to engage in a collaborative grant project to help build their skills in collaboration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5533. Communicating Science to a Broader Audience / Non-Scientists. 3 Credit Hours.**

This writing intensive course will be developed as a hybrid class with online and in-class components, with instructor/s interacting with students by editing multiple drafts of a paper requiring the students to communicate a science topic to readers with either no science background or backgrounds in other STEM fields. The learning goal of this course will be emphasizing the communication of scientific theory and concepts to wide-ranging audiences, especially non-scientists. The class will require students to demonstrate the ability to break down complex science into accurate, yet understandable explanations, by writing an article in the style of the New York Times science section, or a science report in a newspaper such as the Philadelphia Inquirer.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 5582. Graduate Independent Study. 1 to 3 Credit Hour.**

Explorative study or research initiated by a graduate student with faculty sponsorship and an approved independent study contract.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 8001. Teaching of Biology. 2 Credit Hours.**

Required of all first-year teaching assistants. Instruction in the art of teaching laboratories and recitations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 8002. Teaching of Biology. 2 Credit Hours.**

Required of all first-year teaching assistants. Instruction in the art of teaching laboratories and recitations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 8003. Introduction to Graduate Research. 3 Credit Hours.**

This course will provide entering doctoral students in Biology with a broad perspective on philosophical and scientific reasoning, introduce overarching principles in both bioethics and biostatistics, and initiate student development through exercises that emphasize both written and oral communication skills necessary for a successful career in the sciences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 8210. Seminar. 1 Credit Hour.**

Seminar. Topics will vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 8220. Seminar. 1 to 4 Credit Hour.**

Required Laboratory Research Rotation for all first year graduate students

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 8250. Seminar. 3 Credit Hours.**

Seminar. Topics will vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 8260. Seminar. 2 to 4 Credit Hours.**

Seminar. Topics will vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 8450. Seminar. 3 Credit Hours.**

Seminar. Topics will vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 8510. Seminar in Neuroscience. 3 Credit Hours.**

A discussion of recent advances in the clinical and experimental Neurosciences using original research papers or reviews. Particular topics are selected on the basis of student interests and background.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**BIOL 8802. Research Techniques. 4 Credit Hours.**

Laboratory instruction in the biochemical and biophysical techniques used to investigate biological problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BIOL 8985. Teaching in Higher Education: Life Sciences. 1 to 3 Credit Hour.**

This course focuses on the research on how people learn and best teaching practices, with the aim of preparing students for effective higher education life science teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 9283. Directed Readings. 1 to 9 Credit Hour.**

Directed study and discussion of the current research literature

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 9991. Graduate Research Projects. 1 to 6 Credit Hour.**

Short-term, limited research project or laboratory project in the field. The course is for doctoral or master's students, including PSM, MA or MS. This class will not confer full time program status unless nine credits are taken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is required for students who are preparing for the preliminary or candidacy examination. Students should enroll after coursework is completed or when preparing for the candidacy exam until the time that the preliminary or candidacy examination is completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. All students must complete a minimum of one credit of this course. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 9995. Capstone Project. 1 to 6 Credit Hour.**

Capstone project for master's students including students in PSM, MA or MS. This class will provide full-time status. Students in PSM programs need to register for at least one credit of this course to fulfill program requirements. Additional credits may be required for specific programs. Students in the MA program may satisfy this course requirement by completing a library thesis. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

Course for master's thesis research. Only intended for students in thesis bearing master's programs. A minimum of one credit is required. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 9998. Pre-Dissertation Research / Elevation to Candidacy. 1 to 6 Credit Hour.**

This course is intended for students who are performing research prior to candidacy. Students can register for this course after required courses are completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must be registered for this course during the semester that they are to be elevated to candidacy examination. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BIOL 9999. Dissertation Research. 1 to 6 Credit Hour.**

The course is for Ph.D. students who have been elevated to candidacy. During the course of their candidacy students must complete a minimum of two credits of dissertation research. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Biomedical Sciences (Medicine) (BMSC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**BMSC 8001. Introduction to Biochemistry and Molecular Biology. 3 Credit Hours.**

Graduate level course that describes fundamentals of biochemistry and molecular biology. Topics include proteins, enzymes, ligand binding, energy metabolism, carbohydrate, lipid and amino acid metabolism, structure of RNA and DNA, chromosomes and genes, DNA replication and repair, RNA transcription, and protein translation, degradation, trafficking.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8002. Introduction to Cell Biology and Immunology. 3 Credit Hours.**

Graduate level course that describes fundamentals of cell biology and immunology. Topics include prokaryotic and eukaryotic cell biology, mitosis and meiosis, cell cycle control, membranes and membrane channels/transporters, cytoskeleton, cell differentiation, apoptosis, principles of immunology, antigens, cells of the immune system, humoral immune responses, autoimmunity, hypersensitivity and allergies, and host-pathogen interactions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8003. Introduction to Molecular and Cell Biology. 3 Credit Hours.**

Graduate level course that describes fundamentals of molecular biology, genetics and cell biology. Topics include structure of DNA and RNA, chromosomes and genes, DNA replication and RNA, RNA transcription, protein translation, protein degradation and trafficking, prokaryotic and eukaryotic cell biology, mitosis and meiosis, cell cycle control, membranes and membrane channels/transporters, cytoskeleton, cell differentiation and apoptosis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8101. Molecules to Cells. 6 Credit Hours.**

Graduate level course that describes fundamentals of biochemistry, molecular biology, cell biology and immunology. Biochemistry, molecular biology and cell biology will consider both prokaryotic and eukaryotic organisms. Immunology will include principles of immunology and host-pathogen interactions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8102. Experimental Design and Biostatistics. 1 Credit Hour.**

This is a one-credit course designed to provide first year Biomedical Science graduate students basic information concerning experimental design and biostatistics. The emphasis of this course will be to provide practical information pertaining to the design of biomedical experiments and their analysis using a variety of statistical approaches.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8103. Scientific Integrity and Bioethics. 1 Credit Hour.**

This is a one-credit graduate course to provide Biomedical Science graduate students with instruction in ethical conduct of research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8104. Introduction to Laboratory Research I. 1 Credit Hour.**

This is a one-credit graduate course to provide Biomedical Science graduate students with exposure to the research opportunities in the five Biomedical Science research clusters and to obtain supervised research experience in the laboratory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8201. Organ Systems: Function, Dysfunction and Therapeutics. 4 Credit Hours.**

This graduate level course provides instruction in the physiological, pathophysiological and pharmacological aspects of various organ systems. Organ systems will include cardiovascular, pulmonary, renal, endocrine, musculoskeletal and neurological.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8202. Scientific Communications. 1 Credit Hour.**

This course will provide instruction in both written and oral scientific communications. Students will be guided in the preparation of power point presentations, abstracts and full manuscripts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8203. Introduction to Bioinformatic Tools and Applications. 1 Credit Hour.**

This is a one-credit course to provide instruction in bioinformatic approaches to the conduct of biomedical research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8204. Introduction to Laboratory Research II. 1 Credit Hour.**

This is a one-credit course to provide Biomedical Science graduate students with supervised research experiences within laboratories.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8205. Cell Structure & Function. 2 Credit Hours.**

The goal of this course is to learn the structure and function of basic tissues in the body. Emphasis will be on the study of the structure of different cell types in the body and how this relates to their function.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8206. Molecular, Cellular and Systems Signal Transduction. 2 Credit Hours.**

This course will discuss basic mechanisms of cell signaling in a variety of different cell types.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8207. Molecular Approaches to Research. 2 Credit Hours.**

The goal of the course is to give students an understanding of basic and novel molecular approaches to biomedical research. The following major issues are addressed: (i) what are the molecular approaches most frequently used in biomedical research; (ii) why a particular approach fits a specific question asked in the course of research, and how to select the most suitable approach; and (iii) what is the molecular basis of these experimental approaches, i.e. how and why the techniques used in the lab work. Areas of instruction will include methods for the study of DNA, RNA and protein, optical approaches, transgenic animals and other animal models of human disease and single-cell analysis using flow cytometry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8401. Scientific Grant Writing. 1 Credit Hour.**

The overall purpose of this course is to provide training to Biomedical Science graduate students in the preparation of a successful grant application.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8500. Cancer Biology and Genetics Student Seminar and Journal Club. 1 Credit Hour.**

This course will require that the student participate in two separate activities: (i) attend and participate in the student seminar series of the Cancer Biology and Genetics cluster and present a literature based seminar on a topic within this field of study, and (ii) attend and participate in a specialized journal club in an area of interest. The course director will provide students with detailed course/grading policies, schedules, and a list of journal clubs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8502. Cancer Biology. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Cancer Biology and Genetics Cluster of the Biomedical Sciences Graduate Program. It is an interdisciplinary course taught by faculty from the School of Medicine and the Fox Chase Cancer Center. The goals of the course are 1) to provide students with a comprehensive background of cancer, from the patient to the transformed cell, 2) to provide a molecular understanding of the difference between normal and cancer cells and 3) to provide an understanding of the origins, treatments and prevention of cancer. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8503. Genetics and Epigenetics. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Cancer Biology and Genetics Cluster of the Biomedical Sciences Graduate Program. The focus of this course is on Hereditary Mechanisms and Epigenetics. Mendelian diseases and complex phenotypes will be reviewed. The major focus will be on mechanisms of Epigenetic modifications and heritability, including its role in development and disease. Experimental approaches to epigenetics studies will be presented and papers from the literature will be the backbone of the course. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8510. Special Topics in Cancer Biology and Genetics. 2 Credit Hours.**

This course is based on the breaking research findings in the area of Cancer Biology and Genetics and the interests of the faculty and students within this cluster. Topics will vary year to year. The course director will provide students with detailed course/grading policies, schedules and reading lists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8600. Infectious Disease and Immunity Student Seminar and Journal Club. 1 Credit Hour.**

This course will require that the student participate in two separate activities: (i) attend and participate in the student seminar series of the Infectious Disease and Immunity cluster and present a literature based seminar on a topic within this field of study, and (ii) attend and participate in a specialized journal club in an area of interest. The course director will provide students with detailed course/grading policies, schedules and a list of journal clubs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8602. The Biology of the Immune Response. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Infectious Disease and Immunity Cluster. The focus of this course is the study of the components of the immune system, their development and function, and their roles in various pathological processes. Readings are from the primary literature including landmark papers and recently published work. The successful completion of this course will allow the application of evidence based knowledge to the graduate student's own research project. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8603. Molecular Genetics of Human Viruses. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Infectious Disease and Immunity Cluster. This course aims to provide graduate students with the opportunity to gain knowledge of human viruses and viruses of zoonotic origins. The research methods used in medical virology relevant to elucidating viral replication and pathogenesis will be covered. In addition, the ways for which viruses are used in genetic engineering, cancer treatment and basic research will be discussed. The course covers materials from seminal papers and latest published work. The successful completion of this course will allow the application of evidence based knowledge to the graduate student's own research. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8604. Cellular and Molecular Basis of Host-Microbe Interactions. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Infectious Disease and Immunity Cluster. The focus of this course is to understand the cellular and molecular mechanisms of microbial pathogenesis and the host response to the pathogen. Selected model organisms will be used for in depth exploration of host-pathogen interactions. In addition, certain general strategies of microbial survival and penetration, and of host recognition and response to danger signals, will be covered. Lectures present evidence for current concepts and theories from the primary literature and review articles. Conference hours cover recent relevant research papers. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8610. Special Topics in Infectious Disease and Immunity. 2 Credit Hours.**

This course is based on the breaking research findings in the area of Infectious Disease and Immunity and the interests of the faculty and students within this cluster. Topics will vary year to year. The course director will provide students with detailed course/grading policies, schedules and reading lists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8700. Molecular and Cellular Biosciences Student Seminar and Journal Club. 1 Credit Hour.**

This course will require that the student participate in two separate activities: (i) attend and participate in the student seminar series of the Molecular and Cellular Biosciences cluster and present a literature based seminar on a topic within this field of study, and (ii) attend and participate in a specialized journal club in an area of interest. The course director will provide students with detailed course/grading policies, schedules and a list of journal clubs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8702. Enzymes and Proteins. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Molecular and Cellular Biosciences Cluster. The overall goal of this course is to enable students to understand protein structural and catalytic aspects of contemporary biochemistry. The student who completes this course will be able to engage in dialog about protein structure and function. The student will be able to understand, visualize, reshape, present and discuss data from original sources. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8703. RNA and its Role in Gene Expression. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Molecular and Cellular Biosciences Cluster. The focus of this course is on the study of RNA and its multiple roles in gene expression. The structure, synthesis, processing and function including protein translation of both classic RNA molecules (mRNA, tRNA and rRNA) and nontraditional RNA molecules (such as miRNAs, long noncoding RNAs, RNAs with enzymatic activity) are discussed. Both single molecule based approaches and genomic approaches are discussed. Readings are from the primary literature including landmark papers and recently published work. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8704. Molecular Physiology of Ion Signaling. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Molecular and Cellular Biosciences Cluster. The overall focus of this course is on ion channels and their function in biological systems. Part 1 of the course focuses on ion balance, channel classes and channel structures. Part 2 focuses on the biological impact of ionic control of cytosolic Ca<sup>2+</sup> concentration. Part 3 focuses on the impact of these changes on physiology and disease in multiple organ systems. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8705. Biophysical Approaches to Research. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Molecular and Cellular Biosciences Cluster. Students will learn to appreciate how biophysical principles can be used to understand and measure properties of biomolecules and cells. The areas covered in the course emphasize how to generate, analyze and interpret quantitative information about biological molecules or systems. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8706. Structure and Dynamics of Biomolecules and Assemblies. 2 Credit Hours.**

This is an advanced topics course offered for students in the second year of study in the Biomedical Sciences Graduate Program. The course will focus on understanding structure and behavior of biomolecules and assemblies, including the chemical basis for molecular interactions and techniques for studying macromolecular structure.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8710. Special Topics in Molecular and Cellular Biosciences. 2 Credit Hours.**

This course is based on the breaking research findings in the area of Molecular and Cellular Biosciences and the interests of the faculty and students within this cluster. Topics will vary year to year. The course director will provide students with detailed course/grading policies, schedules and reading lists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8800. Neuroscience Student Seminar and Journal Club. 1 Credit Hour.**

This course will require that the student participate in two separate activities: (i) attend and participate in the student seminar series of the Neuroscience cluster and present a literature based seminar on a topic within this field of study, and (ii) attend and participate in a specialized journal club in an area of interest. The course director will provide students with detailed course/grading policies, schedules and a list of journal clubs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8802. Essentials of Neuroscience. 2 Credit Hours.**

This is a REQUIRED Cluster-based Advanced Course offered by the Neuroscience Cluster of the Biomedical Sciences Graduate Program. This course is open to all graduate students in all disciplines with an interest in learning basic neuroscience. This course focuses on the basic neurophysiological and neuroanatomical aspects of the organization of the nervous system. Neuroanatomical structures and their function will be covered using a system based approach. Sensory, motor and special sensory systems will be included. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8803. Molecular and Cellular Neuroscience. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Neuroscience Cluster. The overall goal of this course is to provide an integrated approach to the understanding of the structure and function of neurons and glia. Topics include the cellular structure of neurons and glia, molecular mechanisms for neural transmission and plasticity, new concepts on neurogenesis and cell fate decisions, signaling pathways for neuronal polarization and neuritogenesis, molecular biology and function of glia, neuron-glia interactions, glial cell pathophysiology, neuroinflammation and the role of glia in the development and progression of various neurological disorders and diseases. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8804. Neuropharmacology. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Neuroscience Cluster. The overall goal of this course is to provide the basic aspects of neuropharmacology by investigating mechanism by which drugs influence and/or modulate different neural system activities and functions. The molecular, cellular and biochemistry characteristics of several classes of drugs with implications for human pathologies will be discussed. Four areas of emphasis will include: structure and function of the nervous system, neurotransmitters and neuromodulators, neuroinflammation and neurodegeneration. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8805. Pharmacology of Drugs of Abuse. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Neuroscience Cluster. The focus of this course is on the pharmacology of drugs of abuse. Topics include historical perspectives of drug abuse, cellular responses to acute and chronic exposure to drugs of abuse, effects of drugs of abuse on the immune system, and medical treatment of drug dependence. Specific drug classes that are covered include opioids, cocaine, amphetamines, spice and bath salts, club drugs, LSD and PCP, alcohol, caffeine, nicotine, benzodiazepines and sedatives, and cannabinoids. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8806. Translational Science of Nervous System Diseases. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Neuroscience Cluster. Students will gain knowledge of translational science regarding the molecular basis of various nervous system diseases, current treatments and rehabilitation, and advances in animal modeling of disease that address prevention and improved treatment modalities. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8807. Developmental Neurobiology. 2 Credit Hours.**

This course will focus on the molecular and cellular mechanisms that govern development of the mammalian central nervous system. Topics include but are not limited to: Development of the Cerebral Cortex, Retinal Development, Glial Development, White Matter Maturation, Neuroprogenitors Cells, Axonogenesis and Dendritogenesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8810. Special Topics in Neuroscience. 2 Credit Hours.**

This course is based on the breaking research findings in the area of Neuroscience and the interests of the faculty and students within this cluster. Topics will vary year to year. The course director will provide students with detailed course/grading policies, schedules and reading lists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8900. Organ Systems and Translational Medicine Student Seminar and Journal Club. 1 Credit Hour.**

This course will require that the student participate in two separate activities: (i) attend and participate in the student seminar series of the Organ Systems and Translational Medicine cluster and present a literature based seminar on a topic within this field of study, and (ii) attend and participate in a specialized journal club in an area of interest. The course director will provide students with detailed course/grading policies, schedules and a list of journal clubs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 8902. Mechanisms of Cardiovascular Pathophysiology. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Organ Systems and Translational Medicine Cluster. The overall goal of this team-taught course is to introduce graduate students to the cellular and molecular mechanisms of multiple cardiovascular diseases, with a focus on experimental approaches. The approach will combine didactic presentation with relevant important scientific literature. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8903. Hemostasis and Thrombosis. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Organ Systems and Translational Medicine Cluster. Selected areas of Hemostasis and Thrombosis will be addressed from a historical perspective to state of the art technology and knowledge. This course will study molecular mechanisms and signal transduction events that regulate hemostasis through coagulation cascades and platelet function. The implications of treatments of bleeding disorders, thrombosis, and the therapeutics will be discussed. Students are expected to read seminal papers and participate in class by contributing to discussion. Each topic will have discrete study objectives. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8904. Translational Pulmonary Physiology - Experimental Basis. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Organ Systems and Translational Medicine Cluster. Selected areas of pulmonary physiology will be addressed from application, experimental, and historical perspectives. This course will study mechanisms that underlie major pulmonary diseases such as acute respiratory distress syndrome, chronic obstructive pulmonary disease, asthma, and ventilator induced lung injury. How these diseases modify the function of the pulmonary system, the mechanical, circulatory and inflammatory profiles of the lung, and interventions to attenuate dysfunction will be discussed. Students are expected to read seminal papers and participate in class by contributing to discussion. Each topic will have discrete study objectives. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8905. Advanced Pharmacology and Translational Medicine. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Organ Systems and Translational Medicine Cluster. Pharmacology is the study of biochemical and physiological processes mediated through exogenous or endogenous substances that interact with living systems. Translational medicine aims to use pharmacological discoveries to develop novel therapies in treatment of human disease. The overall goal of this course is to introduce students to the subject of advanced pharmacology and then to focus on recent advances in methodologies used to develop new therapeutics with an emphasis on experimental approaches. The approach will combine didactic presentation with a combination of informal discussion of important scientific literature. Course materials will be handouts/lecture slides provided by each instructor, and selected research papers from the literature. Each lecture will provide a solid foundation for students to understand the methods and techniques used in experimental pharmacology and translational medicine in addition to the concepts. Student participation in the form of questions and discussion is encouraged. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**BMSC 8906. Development, Function and Diseases of the Musculoskeletal System. 2 Credit Hours.**

This is a Cluster-based Advanced Elective Course offered by the Organ Systems and Translational Medicine Cluster. Lecture topics will include: musculoskeletal histology, development of limbs, muscle, bone and joints, diagnostic imaging of musculoskeletal system and cartilage repair/fracture, cell biology of osteoblasts and osteoclasts, biomechanics of musculoskeletal system, skeletal pathologies and central nervous system/bone interactions. Course syllabus is provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8907. Organ Metabolism - Molecular Pathology and Experimental Models. 2 Credit Hours.**

This is an advanced topics course offered to students in the second year of study in the Biomedical Science Graduate Program. The overall goal of this course is to introduce students to the subject of systemic metabolism and organ metabolism and relate this to various key organ pathologies and diseases. Emphasis will be placed on recent advances in molecular pathways along with the experimental models and methodologies used to develop new therapeutics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BMSC 8910. Special Topics in Organ Systems and Translational Medicine. 2 Credit Hours.**

This course is based on the breaking research findings in the area of Organ Systems and Translational Medicine and the interests of the faculty and students within this cluster. Topics will vary year to year. The course director will provide students with detailed course/grading policies, schedules and reading lists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 9991. Biomedical Science Research. 1 to 6 Credit Hour.**

Students will perform supervised laboratory research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 9994. Preliminary Exam Preparation. 1 to 6 Credit Hour.**

Biomedical Science students will enroll in this course when they are preparing for the PhD Preliminary Examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 9995. Master's Project. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 9996. Master's Thesis. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 9998. Postcandidacy Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BMSC 9999. Dissertation Writing. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

# Biomedical Studies (PBMS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

## **PBMS P100. Histology. 6.25 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## **PBMS P102. General Anatomy. 7 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## **PBMS P103. Lower Extremity Anatomy. 7.7 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## **PBMS P104. Neurophysiology. 2.5 Credit Hours.**

Upon successful completion of this course, the student will: Understand the development of the nervous system and how it relates to anatomy in the adult; Understand the function of electrically excitable cells, the diversity, distribution and action of chemical synapses, the cellular basis of information transmission in the nervous system, and the function of simple neural circuits, particularly spinal reflexes; Understand the principles of sensory transduction and the coding of sensory information in the nervous system; Know the nervous pathways associated with sensory systems, including those conveying cutaneous, proprioceptive, and pain information, as well as the special sense of vision, olfaction, audition and balance, and understand the basic functioning of these systems; Understand the physiology of muscle, and how the nervous system controls muscles to achieve desired movements, especially in relation to posture and gait; Know the nervous pathways associated with motor systems, including organization of the spinal cord, descending pathways, the basal ganglia and the cerebellum, and understand the basic functioning of these systems; Know the circuitry and understand the feedback pathways associated with nervous control of body homeostasis; Understand the structural bases of arousal, higher cortical functions, memory and emotion; Be familiar with hereditary, metabolic and mechanically induced pathologies, especially with respect to peripheral sensation and motor function; Understand the structural bases of neurological examination, and develop an appreciation of the clinical tests used to evaluate nervous system function, especially for the lower extremity.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

## **PBMS P105. Neuroanatomy. 2 Credit Hours.**

The course involves the study of the structure and function of the central nervous system through an understanding of the principal neural pathways involved in the transmission of information. These pathways include those mediating motor and sensory functions, as well as those serving higher cortical functions such as cognition. The neuroanatomic basis of the neurological examination of a patient and the implications of damage to these pathways will be emphasized. The course will be presented primarily through lectures. In addition there will be one lab session and several sessions for the discussion of case studies.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

## **PBMS P109. Biomechanics. 2 Credit Hours.**

The course reviews skeletal and muscular anatomy and discusses those processes necessary to allow posture and locomotion. The students will identify skeletal features through palpation and use these references for segment measurement and evaluation of joint range and quality of motion. Instrumented measurements will supplement clinical measurements. The course provides normal joint ranges of motion in the lower extremities in mature and pediatric individuals; introduces single plane and triplane motions in the open and closed kinetic chains; describes muscle action with respect to joint axes; prepares the student for clinical biomechanical examination and gait analysis; provides a basis for understanding biomechanical pathology; introduces terminology describing segmental deviations from normal structure and function; introduces the student to biomechanical evaluation of diagnostic imaging; and compares clinical measurement with radiological and instrumented findings for an individual.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

## **PBMS P110. Biochemistry. 6 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## **PBMS P111. Physiology. 5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P120. Microbiology. 6.8 Credit Hours.**

The etiology, control, immunology, and pathogenesis of infectious disease related to medical bacteriology, virology, mycology and parasitology. An understanding of the principles of Microbiology and Immunology. A knowledge of microorganisms, their identification and relationship to disease with an emphasis on those microbes of particular interest to the practicing podiatrist. The maintenance of a sanitary environment with an understanding of sources of infection, contagion, and practice of microbial control. A well-rounded scientific approach to the infectious problems of the patient with an appreciation of the contributing medical disciplines. An epidemiological awareness of the responsibility of the podiatrist to the patient. An understanding of microbiologic clinical laboratory services, their reporting systems and their value to clinical practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P201. Advanced Dissection. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P210. Pharmacology. 5.25 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P220. Microbiology. 13 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P221. Pathology. 9 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P222. Pathophysiology. 3 Credit Hours.**

Pathophysiology is the integrated study of the basic medical sciences. Usage of case studies and clinical vignettes taught in a comprehensive medical team approach will serve to help students better understand basic tenants of the medical sciences which will then help them achieve greater success on boards, rotations and clinical practice in the future.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P301. Advanced Dissection. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P401. Advanced Dissection. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P504. Lower Extremity Anatomy. 1.5 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

## Business Administration (BA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**BA 5001. Industrial Organization for Business Strategy. 1 to 3 Credit Hour.**

The course is an applied managerial economics course; industrial organization serves as a foundation for business management and strategy. The course provides the framework within which to study market equilibrium, firm and consumer behavior, and strategic interactions through the lens of firm and firm management. The tools of managerial economics are applied to study problems involving business strategy, industry evolution and dynamics, pricing methodologies, dealing with competitors, managing under uncertainty, asymmetric information, price discrimination, antitrust, auctions, and externalities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5002. Socioeconomic Context of Business. 3 Credit Hours.**

Today's business environment is full of challenges in the form of global competition, regulatory change, rapid technological change and domestic and international market instability. In this context, knowledge of both micro- and macro-economics is becoming an increasingly important tool for solving real world problems. This course is divided into two modules. In the first module, we delve into the microeconomics foundations of business. In the second module, we focus on domestic and global macroeconomics. Economics is a basic underpinning of firm strategy. Economics focuses on the role of markets, the economic behavior of consumers and enterprises, market efficiency, the role of the public sector, firm behavior and the organization of industry. We will discuss important ways in which markets fail, and the challenges and opportunities these market failures create for entrepreneurs and existing businesses. Macroeconomics involves the study of the performance of national economies and the policies that governments use to try to improve economic performance. In this section of the course, we will discuss key economic concepts and data such as GDP, employment, interest rates, inflation, business cycles, and exchange rates to better understand the meaning and significance of these data and their impact on the business environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5003. Legal and Ethical Foundations of Business. 3 Credit Hours.**

Business leader's face values conflicts. This course analyzes economic and moral theories people use to assess whether proposed actions are right or wrong, good or bad, just or unjust. While moral theories can guide our thinking, we explore why they do not always guide our behavior. That brings us to the law. Laws constitute socially imposed incentives and disincentives to encourage people to do what society deems "right". In that way, law represents substantive decisions by the state that are values-based and do not necessarily yield just results. In this course, we come to understand that our laws are not without moral import and that ethics must inform the law because the law in and of itself does little work in informing what should be. It mostly speaks to what is.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5051. Enterprise Management Consulting Experience (EMC) I. 3 Credit Hours.**

The EMC Practicum is an innovative hands-on learning experience involving faculty and students. During their practicum, cross-cultural student teams will assist firms or divisions on a live consulting project. MBA student teams will integrate course work, business experience, and primary and secondary research into highly professional market entry strategies or business plans.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5052. Enterprise Management Consulting Experience (EMC) II. 3 Credit Hours.**

The EMC Practicum is an innovative hands-on learning experience involving faculty and students. During their practicum, cross-cultural student teams will assist firms or divisions on a live consulting project. MBA student teams will integrate course work, business experience, and primary and secondary research into highly professional market entry strategies or business plans.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5087. Leadership and Professional Development Practicum. .5 to 1.5 Credit Hours.**

This academic content provides students with an understanding of human behavior in organizations and the means through which managers can influence that behavior. Specifically, the class considers key situations where the effective exercise of leadership can materially contribute to the achievement of strategic organizational objectives. Emphasis is placed on identifying and developing the personal skills and perspectives necessary to establish and maintain a leadership position, e.g., self-awareness and abilities in such areas as communication, decision-making, problem solving, and behavioral management. These skills are then applied through a carefully crafted practicum to facilitate acquisition of competencies through professional and career development opportunities and planned opportunities to exercise leadership with the context of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**BA 5088. Ethical Decision Making in Business and Professional Development Practicum. .5 to 1.5 Credit Hours.**

This academic content looks at business in the context of its various stakeholders, including shareholders, management, employees, customers, suppliers, government regulators, and local/national/global communities. It explores a range of issues from the role of business in society at large to the ethical dimensions of ordinary business decision-making. Emphasis is placed on identifying and developing the personal skills and perspectives necessary to engage in ethical decision making and leadership e.g., personal ethical behavior, facing ethical dilemmas, whistle blowing and ethical responses to unethical corporate practices. These skills are then applied through a professional development practicum to facilitate acquisition of competencies through professional and career development opportunities and planned opportunities to exercise ethical decision making within the context of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**BA 5111. Globalization. 1.5 Credit Hour.**

Gives students an understanding of the nature and complexity of the dynamic global environment that serves as the external context for the operations of international companies and that is an integral part of understanding international business. Explores the phenomena of globalization and the interdependence of nation states as they impact companies and industries throughout the world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5112. Managing Risk. 1.5 Credit Hour.**

Examines in detail the holistic risk management process from the perspective of an international corporation and defines what risk management is and why organizations have risk managers. Class discussion topics include ethical risk and insurance management practices, as well as administrative and strategic aspects of global corporate risk management such as drafting risk management policy statements, setting risk management goals, and examining how a risk manager operates within a complex international organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5113. The Valuation of Firms. 1.5 Credit Hour.**

Introduces the use of accounting numbers for valuation for both external purposes, including investor models of firm value and credit risk assessment, as well as internal purposes, including project assessment and performance evaluation. Focuses specifically on an accounting review of fundamentals, firm valuation, cash flows, earnings, modeling financial distress, and using residual income to evaluate performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5114. Entrepreneurial Thinking and Innovation. 1.5 Credit Hour.**

Examines issues relevant for entrepreneurs engaged in start-up or early stage ventures as well as those important to managers and stakeholders of new ventures within established organizations, including concepts, skills, know-how, information, attitudes and alternatives. Focuses on two key success factors in new enterprise formation: the entrepreneur and his/her ability to create and recognize opportunities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5115. Law and Ethics in Business. 1.5 Credit Hour.**

Imparts a sense of when and how the legal system may affect business, particularly in the areas of contract, tort, and government regulation. Develops an appreciation of the fact that law and ethics seem many times in business to converge, while in other instances what is legal may not be ethically correct. Explores through discussion of business ethics case studies how such situations arise and how they might be resolved or prevented. Includes training for online research, especially in legal areas using Lexis-Nexis database, and practice in the art of making well-reasoned written and oral arguments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5116. Information Technology Perspectives. 1.5 Credit Hour.**

Provides through discussions of technological and organizational issues an overview of the basic concepts underlying the development and implementation of emerging information technologies that are reshaping businesses and business practices. Culminates in a case study development project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5117. Managing People and Organizations. 3 Credit Hours.**

Focuses on basic issues concerning the management of organizations and human resources, with major emphasis on critical analysis, problem solving and performance evaluation. Provides opportunities to improve managerial and leadership skills through verbal presentations, group work, and specific case analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5118. Strategic Performance Management. 3 Credit Hours.**

This course has been designed to emphasize two fundamental issues in contemporary management practice: strategic cost analysis and management control. Strategic cost analysis deals with how managers' actions affect costs and revenues in a competitive context, and how financial and nonfinancial information can support decisions that enhance the value of the firm. Management control pertains to a study of systems designed for performance measurement and evaluation, rewarding and motivating employees, and coordinating business operations. The emphasis will be on transformational systems such as activity based costing and balanced scorecard.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5119. Real World Problems and Cases for Managers: An Interdisciplinary Approach. 3 Credit Hours.**

The ability to analyze and respond quickly to pressing and often complicated problems is a critical skill set for successful managers and corporate leaders. This interdisciplinary course is designed to increase student confidence and competence in "casing" to prepare for business problems likely to be faced in job interviews and future employment. The focus will be on honing analytical techniques and skills necessary to identify, develop, and implement solutions to significant business problems. Students will analyze several cases and a live business project. The course expands upon knowledge and skills offered in MBA core courses to further enhance student ability to address complex, real world situations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5170. Special Topics. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**BA 5180. Special Topics. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5182. Independent Study. 1 to 6 Credit Hour.**

Study in particular aspects of business administration under the direct supervision of a graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5187. IMBA Practicum: Corporate Visits and Mentoring. 1 to 6 Credit Hour.**

This practicum consists of selected visits to a variety of multinational corporations in Europe, Asia and Philadelphia. Students are exposed to senior officials who outline the factors that go into their international strategic decision making. These interactive sessions, which include question and answer periods, are designed to provide real world insights to corporate behavior and to highlight factors that are important in the international arena. In addition, students may engage in team projects during their summer practicum in Asia.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5190. Special Topics. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5282. Independent Study. 1 to 3 Credit Hour.**

Study in particular aspects of business administration under the direct supervision of a graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5287. Fox MBA Capstone Experience. 3 Credit Hours.**

The capstone experience for the Fox MBA is designed to integrate and apply concepts and skills learned across the entire MBA program. In the capstone, students combine theory, evidence and experience to analyze and solve a strategic challenge in a rigorous, thoughtful way. This course helps learners structure unstructured strategic challenges; develop the ability to recognize and assess strategic opportunities; conduct top-notch market, industry and competitive analysis; foresee strategic implementation issues; support strategic recommendations with financial decision models; manage teams; and lead change by generating support for recommendations. Note: Prior to Summer 2023, the course was titled "Fox Management Consulting Practicum."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Business Admin.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5389. Global Immersion Experience. 1 to 6 Credit Hour.**

This course provides field experience in an emerging market economy that allows students an immersive experience in which they observe firms and participate in short term projects to provide a much greater understanding of the application of MBA coursework in assessing the strategic landscape of the destination country.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Business Admin.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**BA 5411. Business Fundamentals I. 3 Credit Hours.**

A two-week, intensive course prepares new students for the Fall semester by giving an overview of critical business practices - namely ethical behavior and influential communication - as well as addressing current business issues with industry professionals. In addition to laying a foundation for the coursework in the program, this course will explore fundamental issues that permeate all course content, such as ethics and legal compliance, persuasive organizational communication, and current events impacting the domestic and global economy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5412. Business Fundamentals II. 3 Credit Hours.**

This course is an overview of industry, allowing students to develop a business vocabulary conducive to discussion of critical issues facing businesses in today's global economy. Business is explored by examining its place within a national and global system, and the typical structures that influence commerce. Students will be exposed to current issues associated with the central management functions of marketing, strategy, finance, accounting, human resources, information systems, and operations. In addition, students will discuss ethical and social issues with regards to their impact on businesses. Underpinning these discussions will be an understanding of basic macro and micro economic concepts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Co-requisites:** BA 5411.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5486. Capstone Experience: Internship. 1 to 3 Credit Hour.**

The MiM internship is a practical work experience that will typically lead to full-time employment. The experience comes at the end of the program, such that the student has the opportunity to apply classroom learning in a workplace setting related to their desired career field. Students use models of critical and reflective thinking to merge classroom theory with their practical experience. This course will provide you with opportunities important to your future. Over the course of the semester, you will gain firsthand, real-world experience that will help you enhance your skills and knowledge, build your professional network, and explore potential career paths.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Pre-requisites:** Minimum grade of C in FIN 5411 and SGM 5411.

**BA 5487. Capstone Project. 3 Credit Hours.**

The MiM project course may be chosen as a substitute for Internship (BA 5486). The course integrates all previous MiM classwork and applies that integrated knowledge to solving a strategic problem in an evidence-based and theoretically informed way. The primary focus of the course is to enable practical application of all previously learned MiM concepts through student teams engaging with actual clients or industry experts to solve real world challenges. This course is designed to help you develop your ability to recognize and assess strategic opportunities; conduct top-notch market, industry and competitive analysis; foresee strategic implementation issues; and lead change by generating support for your recommendations. This course is also designed to produce useful results for coping with both very real strategic problems and noteworthy uncertainties.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in FIN 5411 and SGM 5411.

**BA 5651. Business Analytics Capstone. 3 Credit Hours.**

The course is designed as the capstone experience for the MS in Business Analytics program and, as such, synthesizes all of the learning from previous coursework in this program. Student groups are paired with firms and work as consultants to provide data analytic solutions. This will allow students a first-hand perspective on decision making by management and understanding the organizational implications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**BA 5685. Internship or Externship in Business. 1 to 3 Credit Hour.**

This course is an independent study in which students will apply their business knowledge in a "real-world" context such as an internship or externship as part of a project for an employer. Therefore, this course presents the opportunity to reinforce and augment what students have learned in the classroom. This course is a hands-on experience aimed at preparing the student for work in a business-oriented career. As an individualized experience, the particular skills and concepts upon which students will draw will differ depending on the particular project and company.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.



**BA 5687. Advanced Professional Development Strategies. 0 Credit Hours.**

Advanced Professional Development Strategies is designed to help graduate students connect past education, current education, and professional experience to rewarding career opportunities. Because the personal stakes associated with managing one's career are high, the topics in this course involve more than "intellectual" comprehension. Accordingly, this course will focus on selected aspects of 1) career exploration, 2) the internship and job search, and 3) the "unwritten rules of engagement" in the professional work environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5751. Multinational Management and Policy. 3 Credit Hours.**

Enhance the diagnostic and problem solving capabilities of decision-makers when confronted with a variety of strategic and/or operational problems in a diverse set of domestic and international environments and situations. Integrate material from functional and general management courses and apply it in the diagnosis and solution of problems that require an integrated company-wide approach. Relies heavily on the case study approach and builds on the Fall course of Management Processes in Global Corporations. Note: Enrollment limited to students in the IMBA program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5800. Special Topics. 3 Credit Hours.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5801. Industrial Organization and Corporate Strategy. 3 Credit Hours.**

Today's executives face an array of commercial problems, a need to develop winning corporate strategies, and the capability to seek practical solutions to critical business issues. The primary focus of this course is on the application of principles of industrial organization to the development and evaluation of corporate strategy. The course will be taught from the perspective of a current executive. In this course, you will examine market function, consumer and firm behavior, and implications for market efficiencies. You will examine how knowledge of markets can be used to establish competitive position. You will use national accounting data to analyze the influences of governmental fiscal, monetary, and trade policies, employment, interest rates and economic growth (or decline) on the executive's options in making key strategic decisions. Realistic short business case study examples are provided demonstrating the power of combining the knowledge of economics with analytical tools that yield valuable insights to solve an array of specific internal commercial problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5804. Global Enterprise Mgt. 3 Credit Hours.**

Learn about multinational business firms and the strategies used to gain competitive advantage in international markets. Develop analytical techniques for studying problems facing multinational firms and designing systems for managing multinational enterprise.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5851. Strategy Formulation and Administration. 3 to 4 Credit Hours.**

Participate in an interactive learning experience while examining the functions, role and skills of top-level executives. Knowledge gained and analytical methods used, in prior courses will be used in analyzing cases from the perspective of the chief executive. Implementation of strategies will be a primary focus. Enrollment limited to students in the Executive M.B.A. program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 5882. Independent Study. 1 to 6 Credit Hour.**

Study in particular aspects of business administration under the direct supervision of a graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5890. Special Topics. 1 to 6 Credit Hour.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 5955. Policy Formulation and Administration. 3 Credit Hours.**

Policy and strategy decision-making roles of top-level managers. Total enterprise problems involving integration of organization objectives, relationships between organization objectives and societal values, policy formulation, corporate strategy, and implementation of top management decisions. Limited to students admitted to MBA program prior to Fall 2005. Note: Intended to be taken in the final semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 8100. Translational Business Research. .5 to 3 Credit Hours.**

Translational Business Research is designed to facilitate research projects focused on translating research findings into management impact for business leaders and policy makers. Students work with research faculty guides to carry out a thematic series of research projects, learning new methods as needed. They learn also to communicate the results and implications effectively to leaders in positions to implement the research insights. Note: The course is open to graduates of the Temple University Doctor of Business Administration program (or equivalent) who have 1) identified a theme for ongoing business research and 2) secured a commitment from a member of the Fox School of Business graduate research faculty to act as research guide and co-author. The course is open to other students who have a graduate degree in business or a related field, with faculty permission. Faculty commitment must be reaffirmed before a student can register for another semester of the course.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**BA 8985. Teaching in Higher Education: Business. 3 Credit Hours.**

This course is required for any student seeking Temple University's Teaching in Higher Education Certificate. The course focuses on the research on how people learn best teaching practices, with the aim of preparing students for effective higher education teaching. All educational topics are considered through the lens of teaching in particularly scholarly areas or disciplines. Course instructors will model innovative teaching methods and uses of technology throughout the semester, providing an experiential component to the learning. The course specifically focuses on the application of the course content to the teaching of courses in business and management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9001. Organizations and Management Theory. 3 Credit Hours.**

This course acquaints students with classic works, current representative theories, and empirical research in the fields of organization behavior and management. Material is grouped into twelve perspectives/topic areas: bureaucracy, scientific management, human relations, contingency theory, lean & quality management, transaction cost theory, network approach, national culture, human resource development, power & politics, labor process, and complexity/chaos theory. Emphasis is on understanding the range of approaches in these fields and developing critical analysis skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9002. Scientific Inquiry-Management Research. 3 Credit Hours.**

This course examines the nature and logic of empirical science, with particular attention to theoretical and applied business research. Topics include: the scientific method, positivism, paradigms, interpretive approaches, postmodernism, and critical research. The course also introduces a range of methods and techniques current in business research, including "grounded theory," measurement, interviewing, survey design, case studies, causal modeling, longitudinal and historical analysis, experiments, and research ethics. Students are asked to apply each of the course topics to the design of research on a topic of their own choosing. There is also a laboratory session in the use of the SPSS statistical package to analyze quantitative data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9003. Seminar in Organizational Behavior. 3 Credit Hours.**

The purpose of the course is to provide foundation knowledge in Organizational Behavior, including classic and contemporary theories, ongoing controversies, and ground-breaking empirical studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9090. Special Topics in Business Administration. 1 to 6 Credit Hour.**

Content varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9101. Getting Your Hands Dirty: The Craft of Data Management and Analysis. 3 Credit Hours.**

This methods course launches doctoral students into the craft of empirical research, enhancing proficiency in research work and nurturing ambitious research projects. The course introduces students to computational approaches to data management and analysis. Students will gain foundational skills in using Python for data collection and manipulation, as well as for constructing novel variables with text analysis, network analysis, and machine learning. The end result will be an original dataset ready for statistical analysis, corresponding to the student's research interests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9102. Professional Communication Skills for Graduate Students. 0 Credit Hours.**

The PhD Professional Communication course consists of two skill level-based tracks focused on learning professional communication skills and writing intensive skills. The first 7 weeks are for intermediate level students (recommended for first and second year students), and the second 7 weeks are for advanced level students (recommended third year or higher). Students will be instructed in verbal skills, clarity in speaking, the formal elements of live and virtual presentations, professional presence, and academic and industry appropriate writing instruction to supplement their existing knowledge. The goal is to develop students' professional communication skills, both academically and professionally. Students will attend synchronous (live) sessions once a week with other students and the instructor. The course will also deliver high-quality video content that students can use independently and with which they can supplement their coursework. Each week students will submit a deliverable and receive individual feedback and additional guidance. The course aligns closely with the Ph.D. Communication Initiative to evaluate students' current competencies and ensure they have the resources needed to stay competitive at the global level. The asynchronous components are customized for PhD and DBA students, and are made available to doctoral students at both the Fox School and to doctoral students across Temple University's various colleges. Additionally, a repository of resources (e.g., videos, practice materials, and references) will be available for students to draw from throughout their Temple education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9103. Econ Theory of Choice. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9104. Game Theory. 3 Credit Hours.**

In this course, we will cover strategic behavior. Strategic in the sense that agents take into account other agents' choices in their decisions. We will discuss dominance, backward induction, Nash equilibrium, commitment, credibility, asymmetric information, and signaling. We will apply these notions to firm behavior, oligopoly models, strategic thinking and consider their implications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BA 9103.

**BA 9105. Business Econometrics I. 3 Credit Hours.**

This course introduces students to the basic concepts of modern econometrics. It provides a broad overview of statistical and econometric techniques used in business research with a focus on the linear regression model. Students will learn how to conduct as well as critique empirical studies in various business disciplines. The main ideas will be illustrated by real-world examples. Students will also get a hands-on experience in data analysis using Stata.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9106. Business Econometrics II. 3 Credit Hours.**

BA 9106 is the second course in the Econometrics series for doctoral students. It covers general principles of econometric estimation and inference and provides theoretical background for standard econometric techniques commonly used in empirical business research. The course primarily focuses on linear models and their estimators such as OLS, GLS, and 2SLS. Economic and business applications of the introduced econometric models will be discussed throughout the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9107. Advanced Topics of AI and Machine Learning for Business Decisions. 3 Credit Hours.**

This is a seminar-based class designed to introduce doctoral students to the advanced AIML methods. This class addresses a host of AIML models such as machine learning for unstructured text/audio/image/link/video data, Deep neural net, Bayesian NN Natural Language Processing, CNN RNN LSTM, Multimodal model, Deep factorization machine, Autoencoders, GANS, Transformers BERT, Graph CN, Deep reinforcement learning, AI chatbots/textbots, and others. It is a continuing class after the AIML 1 class (BA 9101). These advanced AIML tools are applicable for students who majored in Marketing, Management, MIS, Accounting, Finance, Operations, Statistics, Sport, Tourism and Hospitality Management, and other fields with structured and unstructured data analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BA 9101 and BA 9106.

**BA 9108. Capital Markets Research. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BA 9103.

**BA 9183. Directed Study in Business. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**BA 9201. Quant Methods in Bus Res. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8002.

**BA 9202. Qualitative Research Methods. 3 Credit Hours.**

Methods constitute the "lenses" through which scholars view their empirical phenomena. And different methods afford clearer views of different phenomena. Qualitative methods in particular have produced some of the most influential scholarly works within several domains of business research. As consumers, producers, and reviewers of such research, it is therefore important that doctoral students develop greater facility with these methods. The intents of this seminar are thus to help participants add a qualitative lens to their scholarly toolkits -- and to identify the empirical phenomena within their domain of study that are most clearly seen through qualitative methods. At the end of this seminar, participants should expect to have a sophisticated understanding of qualitative research and the resources needed to conduct and publish high-quality scholarship. This seminar is relevant to any doctoral student seeking to better understand human behavior in complex systems, but focuses primarily on organizational contexts. Thus, although the methods being taught are widely applicable, the exemplar articles and best practices for data analysis and publication will be most relevant to business administration students. Participants should expect wide exposure to business administration phenomena, with readings drawn from domains such as organizational behavior, strategy, management information systems, marketing, international business, hospitality, tourism, accounting, and finance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9203. Financial Economics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9205. Information Economics. 3 Credit Hours.**

This is a theory course that studies how we can use optimal contracting to solve problems arising from asymmetric information and conflicts of interests. We will discuss mainly three types of such problems: adverse selection (hidden information), moral hazard (hidden action), and non-verifiability, and their interactions. Solutions to such problems involve screening and signaling. Thus this course can be called several names: information economics, incentive economics, or contract theory. Basic knowledge in calculus, statistics, and micro-economics is required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BA 9103 and STAT 8112.

**BA 9207. Quantitative Research Methods II. 3 Credit Hours.**

This course provides an overview of intermediate quantitative research methods used in the social sciences. Topics include theory of measurement, types of measures, measurement validation, power analysis, experimental designs and analysis of experimental data, survey design and analysis of survey data, and collection and analysis of archival data. The course includes a project that focuses on the design, development, and testing of theoretical models using experimental, survey, or archival data. The project includes an important research topic, a set of testable hypotheses, the empirical method to be used, data collection, data analysis, and interpretation of the results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 8112 or PSY 8011)

**BA 9208. Quantitative Research Methods III. 3 Credit Hours.**

This course aims to provide an overview of advanced quantitative research methods that are used in the social sciences. Topics include structural equation modeling (SEM), longitudinal modeling, multi-level modeling, causal modeling, polynomial regression models with response surface methodology, and emerging methods and tools for configuration theories.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (BA 9105 or PSY 8011)

**BA 9209. Business Econometrics III. 3 Credit Hours.**

BA 9209 is the third course in the econometrics series for doctoral students. It focuses on non-linear models and covers multiple practical situations in which classic linear methods are inappropriate. In particular, topics include sample selection and attrition models, treatment evaluation, duration analysis, and count data models. Also, several advanced estimation techniques such as GMM, bootstrap, and kernel regression will be discussed. Although the majority of lectures will be devoted to cross-sectional methods, the basics of time series analysis will also be covered. The assigned problem sets will include the analysis of practical situations requiring advanced econometric techniques as well as empirical exercises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BA 9106.

**BA 9212. Seminar in Global Finance and Governance. 3 Credit Hours.**

The course introduces students to the basic academic literature in global finance and governance at a doctoral level and to selected advanced topics in this area. The aim is to prepare students to read the literature critically, to strengthen their independent skills, and to help them be ready to select topic in global finance and governance and related areas. Topics will be flexible to class needs but include corporate exchange risk management, international investments, global corporate governance, firm boundaries, financial and strategic issues of multinational firms, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9683. Research Project I. 1 to 3 Credit Hour.**

Research Project I is a Directed Reading/Study course in the Executive DBA program. Research Project I is part of a series of research projects. The objective is to develop a draft research paper proposal that demonstrates progress in the student's research capabilities and provides a foundation for the student's dissertation research. The series of research projects focus on applying the concepts, theories and methods learned in the foundation and methods courses. The research projects provide students with a mentored, structured approach to developing the critical skills required to prepare their dissertation proposal and the dissertation. Students will engage in research under the supervision of an Executive DBA faculty member. At the end of the term, the research project will be reviewed and assessed according to DBA program standards for quality, relevance, and potential impact. During the term, students may be expected to present their work and provide feedback on the work of others in the program. This course is typically offered in the summer after the first year but may also be offered in other terms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9783. Research Project II. 1 to 3 Credit Hour.**

Research Project II is a Directed Reading/Study course in the Executive DBA program. Research Project II is part of a series of research projects. The objective is to develop a research paper proposal that includes methodology details and may include pilot or preliminary data analysis and results. The series of research projects focus on applying the concepts, theories and methods learned in the foundation and methods courses. The research projects provide students with a mentored, structured approach to developing the critical skills required to prepare their dissertation proposal and the dissertation. Students will engage in research under the supervision of an Executive DBA faculty member. At the end of the term, the research project will be reviewed and assessed according to DBA program standards for quality, relevance, and potential impact. During the term, students are expected to present their work and provide feedback on the work of others in the program. This course is typically offered in the fall term but may also be offered in other terms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9801. Understanding the Firm through Management and Organizational Theory. 3 Credit Hours.**

Understanding the shifts in business and their implications for organizations is essential to identifying new areas of study for the modern organization. Firms must adapt to their changing environments by adopting new strategies through analysis and understanding of internal and external contexts. This enhances organizational capability, which is required in order to maintain effectiveness and competitiveness in national, regional and global markets. This course examines the dynamics of complex, global organizations through the lens of foundational theory in management and organizational behavior, including: strategic management; theory of organizations and industries; and behavior of individuals, groups, and organizations in global settings. Students will learn to build on this foundational research by formulating new research questions that address emerging issues and challenges for the modern organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Business Admin.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**BA 9802. Scientific Inquiry through Applied Research. 3 Credit Hours.**

What is research and how is it done? What is theory? What makes a study both practically relevant and of high-quality? This course addresses these questions through an exploration of the philosophy of science and applied scholarly research. It introduces the philosophy of scientific inquiry, common research approaches (e.g., quantitative and qualitative) and common perspectives (e.g., positivistic, interpretative, and critical). Students will learn the basic principles of theory development and testing as well as how to build a conceptual research model. This course takes an "engaged scholarship" perspective, with the aim to influence management practice through rigorous, applied study. Topics include identifying a research topic, forming theoretically-grounded research questions, conducting a literature review, and developing a plan for field work and data collection. This course enables students to identify and foster their personal research interests through a research proposal developed iteratively throughout the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Business Admin.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**BA 9803. Navigating the Global Marketplace. 3 Credit Hours.**

Global structures and institutions drive the strategic behavior underlying their business decisions. The reality of business today requires understanding and working within an industry's multifirm global value chain. Firms operating in the global marketplace must be responsive to and understand differences in political, legal, and economic systems between countries. This course explores the state-of-the-art research surrounding the contemporary global organization and serves as the foundation for applied research into the dynamics of strategy and competition within a global context. Topics include critical elements of global strategic operations including international trade, location of the multinational enterprise, innovation in emerging economies, market entry, and knowledge flows within the firm.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9806. Integrative Perspectives on Business Knowledge. 3 Credit Hours.**

Conceptualizing the organization as a system of integrated, co-dependent elements facilitates new solutions that help an organization achieve its goals. To do this, business leaders must view issues from multiple disciplinary and functional perspectives. Through an integrated, systems-thinking approach, students will learn to address unstructured problems, decision-making under complexity, and organizational change management and strategy. This course integrates contemporary research across the major functional areas of business, including: accounting, finance, human resources, international business, marketing, management information systems, risk and actual science, strategic management, and operations and supply management. Students will learn how to approach organizational issues in new ways and discover novel research opportunities by making connections across multiple disciplines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Business Admin.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**BA 9812. Innovation and Entrepreneurship in the New Economy. 3 Credit Hours.**

In an increasingly competitive global market, leaders must develop new business models and approaches. However, building this competency within an organization can be challenging. This course examines how executives can apply best practices in innovation and entrepreneurship by designing novel products, services, processes, organizational structures, business models, and industry ecosystems. Special emphasis is placed on how executives can anticipate and shape global technological, economic, social, and political factors that facilitate innovation and entrepreneurship within an organizational context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9813. Problem Solving using Quantitative Research Methods. 3 Credit Hours.**

Quantitative research applies statistical techniques to test new theory and hypotheses. This course teaches students how to investigate problems through the design and execution of quantitative research as it applies to experiments, surveys and the analysis of secondary data. Students will learn to apply and evaluate these methods through examples of theoretical and applied research papers that employ quantitative methods. Students will learn the fundamental statistical techniques to develop and test research hypotheses, such as the t-test, correlation analysis and regression. Students will prepare data for analysis and understand how to interpret the results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Business Admin.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**BA 9814. Advanced Quantitative Research Methods. 3 Credit Hours.**

This course explores advanced concepts and topics in quantitative research methods. Students will learn to select and apply statistical techniques to new problems and data. It will cover analysis of variance and the design of experiments, multivariate regression, and logistic regression. It will also enable students to identify and address problems in real-world data sets, including: normality violations, multi-collinearity, and missing data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9815. Problem Solving using Qualitative Research Methods. 3 Credit Hours.**

Qualitative research is the exploration of phenomena in their natural setting that seeks to make sense of underlying mechanisms and processes. This course compares a variety of qualitative techniques, such as case studies, ethnography, action research, grounded theory building and content analysis. Students will review contemporary and classic studies that employ qualitative methods in both theoretical and applied contexts, providing examples of how to use each approach in practice. It will also cover interviewing and observation techniques, coding semi-structured and structured interview data, and building hypotheses based on qualitative data. The course weighs the advantages and disadvantages of different approaches to qualitative research, including positivist, interpretivist, and critical methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Business Admin.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**BA 9816. Creation and Dissemination of Business Knowledge. 3 Credit Hours.**

A fundamental tenet of evidence-based management is that firms will function more effectively if they adopt a theoretically-driven, methodologically-sound approach to decision-making. Building on the basic tenets of theory and knowledge development, this course explores the tools and techniques needed for creating and disseminating knowledge. Drawing on business research literature, students learn advanced issues in theory building, model validation and empirical testing. The course provides practical guidelines for building new theories that are informed by managerial practice and also extend current theoretical models. Participants are challenged to develop cross-disciplinary, evidence-based management practices through applied research that will effectively influence future management practice. Also covered is the process of preparing one's work for publication and successfully navigating the peer review process. Students will study journal selection and how to craft a response to reviewers. These include hands-on application to each student's individual program of research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**BA 9817. Applied Qualitative Methods. 3 Credit Hours.**

This course provides a hands-on approach to understanding qualitative research methodologies and how they can be applied to problem investigation, problem solving, and outcome evaluation in business administration and other related fields. Qualitative research utilizes methods such as observation, interview, focus group, case study, and the analysis of documents and archival data. Major topics include: qualitative research design; principles and practices of data collection; analyzing and interpreting qualitative data; and effective methods for writing and disseminating research findings. Other possible topics include the epistemological foundations of qualitative research, the role of theory in guiding and informing research design, and ethical considerations in human subjects research. Through lecture, small group work, and hands-on experience, the course focuses on training in data collection and analytic techniques commonly used in qualitative research. Students will learn to apply a variety of qualitative methods to research topics, and to choose the most appropriate methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BA 9883. Research Project III. 1 to 3 Credit Hour.**

Research Project III is a Directed Reading/Study course in the Executive DBA program. Research Project III is part of a series of research projects. The objective is to develop a research paper at the level of a manuscript that could be submitted to a conference or a journal. The series of research projects focus on applying the concepts, theories and methods learned in the foundation and methods courses. The research projects provide students with a mentored, structured approach to developing the critical skills required to prepare their dissertation proposal and the dissertation. Students will engage in research under the supervision of an Executive DBA faculty member. At the end of the term, the research project will be reviewed and assessed according to DBA program standards for quality, relevance, and potential impact. During the term, students are expected to present their work and provide feedback on the work of others in the program. This course is typically offered in the spring term but may also be offered in other terms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9890. Special Topics in Business Research. 3 Credit Hours.**

This course will feature a rotating set of topics based on the cutting-edge research conducted by the Executive DBA faculty. Potential topics include executive leadership, emerging markets, social media, data analytics and design thinking.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Registration required each semester while preparing for the Preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Registration required each semester after Preliminary Examinations while researching the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BA 9999. Dissertation Research. 1 to 6 Credit Hour.**

Registration each semester required for students elevated to candidacy and undertaking dissertation research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Business Education (BSED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**BSED 5241. Methods of Teaching Business, Computer, and Information Technology and Marketing Education. 3 Credit Hours.**

Instructional strategies in the teaching of Business, Computers, and Information Technology and Marketing are analyzed and demonstrated. Students are required to prepare lesson plans, teach demonstration lessons, develop a unit plan, participate in our profession, and complete the Intermediate Performance Assessment (IPA; if not completed before). The high expectations of this course will be met by all students to include English language learners and special education students. Lessons will integrate appropriate PA Standards for Business, Computers, and Information Technology or comparable standards, such as those for the National Business Education Association and the Temple College of Education Standards for Effective Teaching. Emphasis is placed on professionalism, and planning and skillful teaching that meet the needs of all students, including those with special needs, diverse, socio-cultural backgrounds, and English language learners. Demonstration lessons will be integrated with the course work to encourage developing teaching competency through a series of presentations appropriate to the student's certification interests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BSED 5251. Current Trends & Developments in Business, Computer and Information Technology & Marketing Education. 3 Credit Hours.**

This course provides business and marketing professionals with the knowledge to understand the concept and trends in the rapidly growing new and emerging information technologies in today's organizations. Learners will explore the research and latest trends in business and marketing technology integration and understand how these trends affect curriculum and instruction in the classroom. This course presents students with insights that will improve their understanding of teaching/learning and identifies strategies for developing a framework for the business, computer and information technology and marketing education programs in the K-12 educational system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**BSED 5513. Methods of Teaching BCIT. 1 to 3 Credit Hour.**

Primarily geared for teachers who will use the computer as an educational tool

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**BSED 5514. Cur Dev & Trends in BCIT. 3 Credit Hours.**

Analysis of the literature on trends in business education as they relate to business and economic education

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Career and Technical Education (CTE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CTE 5401. Current Problems in Career and Technical Education. 1 to 6 Credit Hour.**

This seminar covers selected school and training topics, including workforce development, training, managing information systems, diversity issues, school-industry partnerships, and performance evaluation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTE 5411. Evaluation in Career and Technical Education. 3 Credit Hours.**

Students learn how to develop and use a variety of evaluation methods to monitor student academic and occupational achievement as well as teaching effectiveness. Special emphasis is placed on relating evaluations to occupational curricula and instruction. Students learn about standardized tests and other diagnostic tools frequently encountered and/or used by classroom teachers. Particular attention is given to adapting assessments to meet the needs of all students. Contemporary issues related to testing, grading, evaluation, and accountability are addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 5423. Leadership in Career and Technical Education. 3 Credit Hours.**

This course provides an overview of school leadership and the principles of leading in a career and technical education setting, examining them with specific reference to the roles of the administrative director and comprehensive supervisor. These particular roles are analyzed with an emphasis on inspiring staff to improve students' academic and technical achievement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 5425. Advanced Concepts and Practices in Career and Technical Education. 3 Credit Hours.**

Designed as a survey course, this offering will focus on advanced topics relating to classroom assessment, career and technical education curriculum development, and continuous professional development. The topics selected for inclusion have been identified as skills that serve as solid predictors of a successful classroom educator. The successful educator is one who examines and places clear focus on their students' performance in and out of the classroom. Activities and strategies performed by the educator are certainly important but unless these actions result in raised performance levels and identified learning by the students then these efforts can be classified as having no educational value. The topics included in this course, if utilized by the educator, will provide significant information and assist the educator in making better educational decisions on improving student performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 5426. Professionalism and Staff Development. 3 Credit Hours.**

This course focuses on teacher professionalism and staff development and how schools can build capacity to maintain these systems. The course deals with the national standards for professional development; the process, content, and context of staff development; and the development of reflective practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 5431. Concepts in Career and Technical Education Programs. 3 Credit Hours.**

This course aligns with Temple University's standards for caring and skillful teaching and professionalism. This course is a requirement for intern teachers employed in a secondary career and technical education setting and is designed to develop an understanding of effective teaching theories and practices. This course is designed for students to develop an understanding of effective curriculum concepts and practices related to developing, implementing, and evaluating curriculum in career and technical education areas. Topics include the development of project and/or problem based learning and laboratory based experiences for students. Emphasis is placed on defining all aspects of diversity and providing accommodations and curriculum to meet the learning needs of a broad spectrum of diverse students. Additionally, the role and integration of student organizations into the curriculum is examined. Note: To enroll in this course, students must be admitted to the CTE certification program. The course is a field-based course which means candidates are required to apply all competencies with students in an actual teaching situation. Candidates are full-time "Intern" teachers employed by a local school district or Career and Technical Education Center (CTC). The course, thereby, satisfies the PA Department of Education's (PDE) field experience requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 5605. Models of Teaching. 3 Credit Hours.**

This course aligns with Temple University's standards for caring and skillful teaching and professionalism. This course is a requirement for intern teachers employed in a secondary career and technical education setting and is designed to develop an understanding of effective teaching theories and practices. Students will examine concepts and practices related to curriculum and instructional strategies and develop the knowledge and skills for effective teaching. Emphasis is placed on how federal, state, and industry standards and community and individual needs are used for program and instructional development, and how "best practices" might be employed to deliver coherent instruction that is designed to promote critical thinking in real world contexts. Note: To enroll in this course, students must be admitted to the CTE certification program. The course is a field-based course which means candidates are required to apply all competencies with students in an actual teaching situation. Candidates are full-time "Intern" teachers employed by a local school district or Career and Technical Education Center (CTC). The course, thereby, satisfies the PA Department of Education's (PDE) field experience requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 5669. Project-Based Learning. 3 Credit Hours.**

The course is designed to help educators plan and apply learning theory and principles of project-based learning to the development of business-related instruction in the elementary school classroom.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 5887. Pedagogical Competence. 3 to 15 Credit Hours.**

Prospective career and technical teachers/technical trainees are placed in supervised public school/industrial experiences and assisted in developing specialized teaching strategies through individualized instruction and seminar activities. (This constitutes an alternative delivery system equivalent to the professional requirement.)

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTE 8324. Coordination Methods for Work-Based Learning. 3 Credit Hours.**

The history, development, and operation of cooperative education programs are covered. Also explored are the development and promotion of a workplace-learning program, the development of workplace-learning partnerships, workplace-learning sites, safety considerations for students in the workplace, and connecting work-based and school-based learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8331. Instructional Methods for Work-Based Learning. 3 Credit Hours.**

This course covers the role of the teacher-coordinator in conducting and teaching procedures and activities necessary for providing successful supervised field experiences for students in the workplace. Also covered are methods of establishing contact with students, employers, teachers, parents, and community leaders; career and technical student organizations; and students with special needs. The course also explores developing and understanding labor laws and other legal requirements affecting student workers/interns.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8501. Curriculum Development for Programs of Study in Career and Technical Education. 3 Credit Hours.**

Students study and analyze curriculum theories and the practical application of a systems approach in the analysis, design, development, implementation, and evaluation of technical education and training programs. Students learn about back-to-front design, performance and standards-based education, standards-aligned curriculum systems, and curriculum frameworks associated with program articulation, including "programs of study."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8507. The Role of Career and Technical Education in Workforce and Economic Development. 3 Credit Hours.**

This course explores the range of activities covered by state and federal career and technical (vocational) education laws; career and technical education as an integral part of the public school and workforce development systems; and the development of a point of view regarding the role of career and technical education in economic development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8521. Collaborative Processes for Effective Career and Technical Education Programs. 3 Credit Hours.**

This course focuses on the role of collaboration with both internal and external stakeholders of the CTE enterprise, including relationships with staff, parents, business and industry, government, professional associations and media groups. Students will learn the importance of partnerships and will examine ways to expand and enhance these partnerships for the ultimate purpose of improving student performance. The course is taught in a context of ethical leadership and decision making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8527. Program Planning, Evaluation, and Systems Alignment in Career and Technical Education. 3 Credit Hours.**

Students study the factors used to determine the vocational training needs of labor market areas, including local industrial expansion, recession, unemployment, aging workforce, and emerging technologies. Students also consider the organization, academic and skills standards, curriculum and instruction alignment, physical facilities, post-secondary connections and articulation, and scope and sequence of career and technical education programs. The course also focuses on conducting formative and summative program evaluations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8528. Creating a Culture of Teaching and Learning in Career and Technical Education Programs. 3 Credit Hours.**

This course is designed to prepare CTE leaders to empower and support professional staff to improve students' academic and technical performance. Candidates will learn how to implement clinical supervision, peer coaching, and apply formative and summative personnel evaluation methods in workforce education programs. In addition, school reform initiatives and best practices will be addressed that frame staff development as a system for continuous learning and improvement of the CTE curriculum and students' learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8589. Managing Resources and Data Driven Decision Making in Career and Technical Education. 3 Credit Hours.**

CTE facilities are unique to education. They include industry-standard equipment and utilities that are not typically found in academic high schools. Prospective CTE leaders must understand and know how to apply systems to secure, maintain, and replace facility related items for technical curricula. These systems ensure the health and safety of students while providing the required resources to effectively prepare them for a variety of technical careers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTE 8690. Problems in CTE. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTE 8890. Special Topics/Problems in Career and Technical Education. 3 Credit Hours.**

The course focuses on contemporary issues and/or problems in workforce education. Enrollment is limited to master's degree students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTE 9389. Supervised Work Experience. 1 to 3 Credit Hour.**

Technical work experience in business and industry designed for all fields of career and technical education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTE 9482. Directed Independent Study. 1 to 6 Credit Hour.**

Problem-based topics related to vocational education or technical training are investigated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTE 9685. Internship in Career and Technical Education. 3 to 6 Credit Hours.**

Credit is given for a supervised internship within a specified field of CTE/technical training to provide the student with leadership development experiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTE 9885. Internship in Career and Technical Education. 3 to 12 Credit Hours.**

This supervised internship in a CTE setting provides the student, who is a candidate for system leader, with education leadership experiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Chemistry (CHEM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CHEM 5001. Advanced Inorganic Chemistry I. 3 Credit Hours.**

Group theory and its applications to chemical systems. Molecular orbital theory and spectroscopy. Descriptive chemistry of transition metal and organometallic compounds.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5005. Organometallic Chemistry. 3 Credit Hours.**

A survey of the chemistry of organic compounds of the main and transition elements, with emphasis on their reactions and applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5102. Data Analysis and Evidence. 2 Credit Hours.**

Forensic chemistry involves the forensic application of analytical chemistry theories, techniques and instrumentation to the analysis of controlled substances, fire debris evidence, explosives, and other trace evidence/chemical unknown materials. This course will cover those concepts relevant to the field of forensic chemistry including chain of custody, the theory and practical applications of the uncertainty of measurement and propagation of error. Students will also learn the classifications and unique physical and chemical characteristics of forensic chemistry evidence and investigate the physical and chemical characteristics of this evidence through the use of chemical, microscopic and instrumental techniques. The chemical characteristics of explosive materials as well as the analytical techniques used to analyze these samples will also be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5103. Advanced Instrumental Methods. 3 Credit Hours.**

Recent developments in electrochemical and electroanalytical techniques, including voltammetric and potentiostatic procedures and the basics of instrumental design. Applications to organic chemistry, trace analysis, chromatographic detectors, and electrokinetics discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5107. Drug Analysis. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5108. Investigative Chemistry. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5201. Physical Methods in Organic Chemistry. 3 Credit Hours.**

Principles and applications of important physical and spectroscopic methods; IR, UV, NMR, MS, ESR, ORD, and CD in structure determination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5202. Organic Reaction Mechanisms. 3 Credit Hours.**

This course is an introductory overview of organic structure and most common organic reaction mechanisms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5205. Organic Syntheses. 3 Credit Hours.**

Scope and limitations of modern synthetic methods, including silicon reagents, organometallic and radical chemistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5301. Quantum Chemistry. 3 Credit Hours.**

Introduction to quantum mechanics and its application to chemical systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5302. Statistical Thermodynamics. 3 Credit Hours.**

The basic concept of statistical mechanical ensembles and their application.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5304. Nanomaterials Chemistry and Physics. 3 Credit Hours.**

This course will cover the key chemical/physical properties of nanomaterials as well as nanomaterials characterization and synthesis for graduate students. The goal of this class is to help students get familiar to the important concepts associated with the confined dimensionality in nanomaterials and apply these concepts to understand unique electronic/optical properties of nanomaterials and the thermodynamics/kinetics of forming nanomaterials. The course is organized with four modules: 1) Introduction to Nanoscience - Physical and Chemical Concepts, 2) Characterization of Materials at Nanoscale, 3) Fabrication of Nanostructures and Nanomaterials, and 4) Case Study of Specific Nanomaterials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5305. Chemical Kinetics. 3 Credit Hours.**

A study of the dynamics of chemical reactions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5358. Cellular/Molecular Neuroscience. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5401. Biochemistry I. 3 Credit Hours.**

A survey of the biological macromolecules (proteins, nucleic acids, carbohydrates, and lipids) correlating their structures with their chemical properties and biological functions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5402. Chemical Biology. 3 Credit Hours.**

This course will focus on the interactions between chemicals and biomolecules, with an eye on how to search, create, and modify molecules that can be either probes to understand, or therapeutic drugs to treat human diseases. Modern medicinal chemistry and biotechnologies will be covered to elucidate how chemistry can be used to perturb the biomolecules' structure and function, topics not typically studied in an undergraduate organic chemistry or biochemistry course. An advanced level of study in chemical biology can only be attained by a critical reading of scientific literature, and this course will consist of both lectures and student presentations of literature research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5412. Structural Bioinformatics II. 3 Credit Hours.**

This course provides an introduction to structural bioinformatics, with focus on understanding three dimensional structures of biological macromolecules. Topics covered include: an overview of macromolecular structure determination, introduction to molecular modeling theory and the application of computational modelling in structure based drug design. The course also offers practical training on the application of molecular modelling methods for understanding structural biology and in rational drug discovery.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BIOL 5411.

**CHEM 5505. Advanced Polymer Structure and Properties. 3 Credit Hours.**

Polymers are ubiquitous in many new (scaffolds for tissue engineering, hip replacements) and old (textiles, engineering resins, flocculants) applications, and are often used in composites with inorganic materials. In order to better understand the use and novel developments of polymers, this course will provide the fundamentals of synthesis, polymer structure/property relationships, and characterization methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5701. Teaching of Chemistry. 0 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 5901. Responsibility and Ethics in Chemical Research. 1 Credit Hour.**

The primary goal of this course is to educate graduate students in the ethical and responsible practices of scientific research. The course is designed to meet the requirements of both the NIH and NSF for training in responsible conduct of research (RCR). As an independent scientific researcher it is critical to have an understanding on what constitutes ethical scientific practices both in the laboratory and in professional interactions with colleagues. This course will be based on student-led presentations and case study discussions in order to understand the real world applications of these issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8000. Special Topics in Inorganic Chemistry. 3 Credit Hours.**

A survey of a topic chosen by the instructor. Topics could include bioinorganic chemistry, organometallic chemistry, solid state and materials chemistry, and catalysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**CHEM 8001. Leadership, Law and Ethics in Forensic Science. 3 Credit Hours.**

This course will provide the students with an introduction to the American criminal justice system, explain the role of the forensic scientist in the criminal justice system, and discuss theoretical and practical applications of forensic science laboratory management. Students will learn successful leadership styles and discuss topics relating to ethical behavior, quality measures including quality control and quality assurance, communication and privacy issues relating to forensic science as well as resource management. Through discussion and analysis of the U.S. Constitution, the Pennsylvania Constitution, Federal (and State) Rules of Criminal Procedure, and Federal (and State) Rules of Evidence with particular emphasis on case law, students will develop a practical understanding of modern criminal jurisprudence. Special emphasis and consideration will be given to the ethical obligations of criminal justice practitioners, including judges, prosecutors, defense attorneys, law enforcement officers and expert witnesses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8002. Practical X-Ray Diffraction. 3 Credit Hours.**

Students will learn the theory and practice of crystal structure determination by the method of single-crystal X-ray diffraction. Students will become independently competent in each stage of the crystal structure data collection, solution, and refinement processes, and will understand the theory behind each stage, as well as how to overcome common pitfalls. The course features expanded topics over the undergraduate version of the course (CHEM 4004), including how to treat common crystallographic pitfalls in solution structure and refinement. These include disorder, twinning, space group ambiguity, and misplaced origin errors. Mode: 3 hours of lecture and/or lab per week.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8007. Biotransformation of Drugs and Xenobiotics. 3 Credit Hours.**

Drug Metabolism is an essential component of forensic sciences. This course is important for a thorough understanding of the basic concepts of absorption, distribution, elimination, excretion, and in particular xenobiotic disposition. The discipline of biotransformation continues to evolve as it adapts to new scientific discoveries bringing new opportunities for forensic science research. This course is designed to teach the advances in drug metabolism.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8107. Advanced Forensic Chemistry. 3 Credit Hours.**

Forensic chemistry involves the forensic application of analytical chemistry theories, techniques and instrumentation to the analysis of controlled substances, fire debris evidence, explosives, and other trace evidence/chemical unknown materials. This course will cover those concepts relevant to the field of forensic chemistry including chain of custody, the theory and practical applications of the uncertainty of measurement and propagation of error. Students will also learn the classifications and unique physical and chemical characteristics of forensic chemistry evidence and investigate the physical and chemical characteristics of this evidence through the use of chemical, microscopic and instrumental techniques. The chemical characteristics of explosive materials as well as the analytical techniques used to analyze these samples will also be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B+ in CHEM 5102.

**CHEM 8111. Forensic Toxicology. 3 Credit Hours.**

Students in this class learn to apply fundamental principles of toxicology (e.g., dose response, toxicokinetics, pharmacodynamics, route of exposure) to understand common drugs and chemical exposures that often are involved in forensic cases. The course teaches toxicology from three different but overlapping approaches: Common Drugs and chemical toxicants (e.g., alcohol, cannabis, opioids, other drugs of abuse, metals, gases), Mechanisms of Toxicity (e.g., oxidative stress, cell death) and Organ System Toxicity (e.g., neurotoxicity, liver toxicity, etc.). The course makes use of real world case examples thereby allowing students to apply theory to practice.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8200. Special Topics in Organic Chemistry. 3 Credit Hours.**

Advanced lecture course; subject matter varies from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 8201. The Chemistry of Natural Products. 3 Credit Hours.**

Biogenetic classification, classical and modern synthetic approaches to polyketides, steroids, terpenes, and alkaloids.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8205. Heterocyclic Chemistry. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8210. Special Topics in Organic Chemistry. 3 Credit Hours.**

Advanced lecture course; subject matter varies from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 8300. Special Topics in Physical Chemistry. 3 Credit Hours.**

Advanced lecture course, subject matter varies from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 8301. Molecular Spectroscopy. 3 Credit Hours.**

Absorption, emission and scattering of light by molecular system. Discussion of basic principles and experimental techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8302. Computational Chemistry. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8303. Modern Meth in Exp Chem. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8310. Special Topics in Analytical Chemistry. 3 Credit Hours.**

Advanced lecture course, subject matter varies from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 8400. Special Topics in Biochemistry. 3 Credit Hours.**

Advanced lecture course; subject matter varies from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 8401. Bioinorganic Chemistry. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8501. High Polymer Chemistry. 3 Credit Hours.**

Introduction to the important theoretical and practical aspects of high polymer chemistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8601. Analytical Separations. 3 Credit Hours.**

Theory and practice of modern separation methods with emphasis on chromatographic and electrophoretic techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CHEM 8985. Teaching in Higher Ed:Phys Sci. 1 to 3 Credit Hour.**

Teaching in Higher Education: Physical Sciences. This course focuses on learning theory and the best teaching practices, with the aim of preparing students for effective higher education teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9300. Seminar in Physical Chemistry. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9800. Seminar in Forensic Chemistry. 1 Credit Hour.**

Wide-ranging introduction to key areas and "hot topics" in forensic science, as presented by a series of guest lectures by leading practitioners in the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9900. Seminar. 2 Credit Hours.**

Formal presentation of research topics by graduate students. Regular attendance required of all graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9901. Original Research Proposal Preparation. 1 Credit Hour.**

This class affords guidance on developing the original research proposal, a required component for advancing to PhD candidacy in the Department of Chemistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CHEM 9900.

**CHEM 9991. Graduate Research Projects. 1 to 6 Credit Hour.**

Short-term, limited research project or laboratory project in the field. The course is for doctoral or master's students, including PSM, MA or MS. This class will not confer full-time program status unless nine credits are taken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is required for students who are preparing for the preliminary or candidacy examination. Students should enroll after coursework is completed or when preparing for the candidacy exam until the time that the preliminary or candidacy examination is completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. All students must complete a minimum of one credit of this course. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9995. Capstone Project. 1 to 6 Credit Hour.**

Capstone project for master's students including students in PSM, MA or MS. This class will provide full-time status. Students in PSM programs need to register for at least one credit of this course to fulfill program requirements. Additional credits may be required for specific programs. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Science, Prof Science Masters.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

Course for master's thesis research. Only intended for students in thesis bearing master's programs. A minimum of one credit is required. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9998. Pre-Dissertation Research / Elevation to Candidacy. 1 to 6 Credit Hour.**

This course is intended for students who are performing research prior to candidacy. Students can register for this course after required courses are completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must be registered for this course during the semester that they are to be elevated to candidacy examination. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Chemistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Science & Technology.

**Repeatability:** This course may be repeated for additional credit.

**CHEM 9999. Dissertation Research. 1 to 6 Credit Hour.**

The course is for Ph.D. students who have been elevated to candidacy. During the course of their candidacy students must complete a minimum of two credits of dissertation research. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## City and Regional Planning (CTRP)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CTRP 5013. Planning History and Theory. 3 Credit Hours.**

Coursework focuses on examining important trends in planning theory and placing them in a historic context. This approach facilitates an understanding of the relationship between the theoretical conceptualizations of urban form and the functional manifestations of those conceptualizations, which are key to relating planning theory to planning practice. The course strives to identify practicable as opposed to heuristic planning theory. These distinctions are extensively explored. A review of the contribution of "planning pioneers" provides a synthesis to contemporary planning problems and issues. A concluding examination of ecology and planning theory offers a direction for planning theory and practice in the 21st Century.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: XMSCR.P.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5014. Planning Politics and Administration. 3 Credit Hours.**

This course outlines the political and administrative environment of planning, including the influences of pluralism and federalism on planning in the United States. It introduces students to various agencies and organizations that conduct or impact planning, including public agencies, authorities, consulting firms, and non-profit organizations. Coursework explores policy implementation, including legislation, regulation, negotiation, and incentives, and the role of organizations and planners as professionals with respect to the current literature on organizational theory and development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5113. Nonprofit Management. 3 Credit Hours.**

The course provides an overview of management of nonprofit organizations, including issues pertinent for nonprofit managers and leaders faced with changing organizational environments. Most community development activities are centered within a nonprofit organization or work closely with these community-based organizations. Students are introduced to the major aspects of nonprofits and voluntary organizations that distinguish them from public and private organizations: mission/vision; legal definitions/IRS rulings; voluntary governance structures; and a social change agenda. Topics covered include the history and scope of the nonprofit sector, variations within the sector, contemporary theories of nonprofit enterprise, growth in the international nonprofit sector, management issues which pertain to nonprofits, financial management, accountability, human resources management, strategic planning, collaborative partnerships, leadership, advocacy, and the future of the sector.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5157. Community-based Organizations in Planning. 3 Credit Hours.**

Examines the forty year history of community-based organizations (CBOs) and the important role they play in the housing, economic and social development in low-income communities. CBOs strive to build community leadership and empower low-income people to take charge of their own future. Understanding the role of such organizations is crucial in being an effective planner. Profiles a select number of the over five hundred CBOs in Philadelphia to learn about land trusts, housing development, Neighborhood Advisory Committees, resident associations, service districts, tenant councils and faith-based programs. Field trips to a number of community-based organizations to supplement classroom discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5251. Sustainable Food Systems Planning. 3 Credit Hours.**

Planners are paying attention to the notion of food system planning: farm land preservation and environmental stewardship; economic development including distribution, processing, employment and globalization; and food security, involving access to affordable, healthy foods. There are also issues of public health, food cultures, consumer spending patterns, and education. This course explores all of these concerns. Guest speakers and field trips provide a focus on regionally based food systems initiatives. Course readings and lectures address work that is underway elsewhere in North America. Students develop an appreciation for the ways in which a food systems perspective can enrich community planning efforts and create more sustainable and vital places in which to live and flourish.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5256. Sustainable Community Design and Development. 3 Credit Hours.**

Introduction to the evolution, theory, and practice of planning for sustainable communities. Students evaluate recent conceptions of sustainable development, building an understanding of characteristics that define sustainable communities, implementation strategies, local-regional-global relationships, and constraints to achieving more sustainable communities. Recent climate change reports and policies are examined as well as their impacts on sustainable community planning and development in the United States. The course includes lectures, class discussion, guest lecturers, outside lectures, and case studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5313. Community Development Finance. 3 Credit Hours.**

The course examines the history and practice of community development finance in the United States. Low-income communities face particular challenges in meeting their credit needs through the traditional financial sector. Over the past 100 years, various institutions have developed to both advocate for change and to cover this gap. The course explores strategies for developing assets for low-income families and low-income communities. Different types of community development finance projects are discussed, including affordable housing, charter schools, community facility, small business lending, and nonprofit real estate projects. The course concludes with an examination of continuing challenges to meet the depository and credit needs of low-income communities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5413. Planning Communications. 3 Credit Hours.**

Planning in public, private, and non-profit organizations depends on effective communication among planners, employees of public agencies, elected officials, media representatives, and the public. The professional planner plays a key role in organizing, facilitating, and participating in conversations about the future of communities of all types. Strong communication skills are essential in most aspects of planners' work and are the focus of this course. Topics include the relationship between planning analysis and communication; interpersonal communication; and graphics, written, and public presentation skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5455. Community Engagement and Empowerment. 3 Credit Hours.**

This class explores the theory and practice of involving citizens in agency-led and community-based planning processes. Readings, class discussions, case studies, and guest lectures emphasize building knowledge and skills necessary to develop open and inclusive processes using a continuum of civic engagement practices such as community organizing, outreach and education, interactive tools and technologies, charrettes and full empowerment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5513. Planning Analysis. 3 Credit Hours.**

This course introduces a set of analytical tools that are widely used in community and regional planning practice. The course explores both conceptual and operational understandings of a broad range of analytical methods and techniques. Students learn to obtain data; select and use the most appropriate analytical methods (with an emphasis on computer applications, such as Microsoft Excel); and present their results effectively. Topics covered include data sources and collection, application of statistics to planning practice, demographic models, population projections and forecasts, regional economic analysis, and other methods common to planning analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5524. Spatial Analysis Techniques/Geographic Information Systems. 3 Credit Hours.**

Introduction to basic principles and techniques of Geographic Information Systems (GIS), a computer-based tool using spatial (geographic) data to analyze and solve real-world problems. Applications are from community and regional planning and other related disciplines. Lab exercises emphasize spatial data collection, entry, storage, analysis, and output using the software "ArcGIS." Students are introduced to GIS datasets used by the Center for Sustainable Communities, a research center in the Department of Planning and Community Development. Some lab assignments are based on planning issues in Southeastern Pennsylvania.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 5525. Advanced Techniques in Geographic Information Systems (GIS). 3 Credit Hours.**

This course explores ArcGIS extensions, including Spatial Analyst, 3D Analyst, Network Analyst, and Image Analyst, and their uses in the field of community and regional planning. It introduces data collection methods, using GPS and Aero-Triangulation; the GIS-based concepts and applications of land suitability analysis; and Planning Support Systems software (such as CommunityViz and Index) for land-use forecasting and planning. Students work on real-world environmental planning projects in a studio setting using local and regional data sets. Guest lectures are offered by GIS practitioners.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (CTRP 5524 or CRP 5524)

**CTRP 8013. Planning History and Theory. 3 Credit Hours.**

Coursework focuses on examining important trends in planning theory and placing them in an historic context. This approach facilitates an understanding of the relationship between the theoretical conceptualizations of urban form and the functional manifestations of those conceptualizations, which are key to relating planning theory to planning practice. The course strives to identify practicable as opposed to heuristic planning theory. These distinctions are extensively explored. A review of the contribution of "planning pioneers" provides a synthesis to contemporary planning problems and issues. A concluding examination of ecology and planning theory offers a direction for planning theory and practice in the 21st Century.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8016. Planning Law. 3 Credit Hours.**

Coursework addresses selected aspects of the field of law of planning and urban development, including constitutional, property, nuisance law, administrative law, state and local government law, and zoning and subdivision regulation. It seeks to impart an understanding of the nature of law and the structure and processes of the judicial system by using urban land-use control law as the vehicle. It explores the relationships between the courts and the legislatures, especially the municipal legislative bodies that have primary responsibility for regulating land development and land use. Students learn legal research methods and are exposed to the wealth of trenchantly written, up-to-date materials that are available on the web and in the law library.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8056. Public Budgeting and Finance. 3 Credit Hours.**

Knowledge of budget concepts and financial management is required for the successful operation of government, nonprofit, and for-profit organizations. The course addresses the basics of public budgeting for those with little or no experience and presents more advanced concepts for those who have some experience in budgeting and finance. Discussion of the entire budget process, including budget formulation and execution, program development, cost and revenue estimation, internal controls and audits, budget strategies and tactics, capital budgeting and debt management. Uses case studies, in class discussions, and guest speakers involved in the development of state and local budgets to provide a broad understanding of the practical and political aspects of public budgeting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8114. Urban Form and Design. 3 Credit Hours.**

This course examines the many elements that contribute to the aesthetic and human quality of communities of all sizes. It analyzes the nature of public spaces, streets and boulevards, landscaping, water, materials, light, scale, mass, and time. The roles of unity, harmony, symbolism, and cultural values are explored. The course has both historical and current references. Students participate in design projects, visual design analyses, and presentations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8155. Ecological Planning and Development. 3 Credit Hours.**

The fundamentals of the ecological planning method developed by landscape architect and regional planner, Ian McHarg, establish a basis to plan and develop both individual projects and entire communities that can be enduring/sustainable. Students examine both theory and practice in the relationship between ecological planning and actual development. Case studies, field trips, and guest presenters highlight specific examples of the successful implementation of ecological planning by the private development sector.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8156. Neighborhoods, Cities, and Regions. 3 Credit Hours.**

More than 80% of the U.S. population now lives in urbanized areas. This course examines the history of the development of urban (and suburban) form, together with some of the environmental, physical, social, and economic factors that created or influenced those forms. Emphasis is on the development of the European and North American city, from Athens to imperial Rome, to the 19th- and 20th-century industrial metropolis, and its suburbs. (Other great cities of the ancient world may be discussed.) The course looks at the late 20th-century unraveling of the urban fabric and the de-concentration of cities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8165. Placemaking: Revitalizing Urban Communities. 3 Credit Hours.**

The term placemaking, often used interchangeably with creative placemaking, refers to a particular approach to community building and revitalization that has gained popularity in recent years. Through readings, lectures, exercises, and tours students will explore placemaking practices focused on asset based, bottom up approaches that seek to enhance the social fabric while improving physical places. This includes local economic development and revitalization practices that value community identity as expressed in local cultural historic and natural resources, but also includes other types of practices that simply seek to create a sense of "place" in some otherwise under-used or ill-defined space. Students will assess place-making practices and identify opportunities for placemaking in Philadelphia's neighborhoods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8166. Land-Use Planning. 3 Credit Hours.**

At the heart and soul of community and regional planning is land use. How we use land and the institutional and legal basis by which we establish and implement land-use goals are key elements in how our communities and regions are shaped. This course examines the foundations of land-use planning, which begins with an understanding of attitudinal, value, and ethical perspectives of how land resources are used. The range of land-use implementation approaches - regulatory, fiscal, incentives, and public investment - is also evaluated. The course additionally discusses the importance of ecological planning and design as prospects for contemporary land-use planning to create sustainable communities and regions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8175. Gentrification and Equitable Development. 3 Credit Hours.**

With the recent revitalization of cities, gentrification has become a real, complex and highly contested issue that represents progress for some and displacement or its threat for others. This course investigates gentrification and interventions aimed at limiting its negative effects. Through analyzing academic literature, current events and case studies, we consider: the process, forms, agents and impacts (positive and negative) of gentrification; examine the roles of policy, planning and community development in the gentrification process; and investigate programs and strategies that practitioners could implement to foster equitable development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8213. Environmental Planning. 3 Credit Hours.**

Environmental issues and concepts faced by planners and the methods used to address them are the focus of this course. It further applies principles of natural science disciplines to the analysis of man's physical environment and the synthesis of plans that respect and incorporate those principles. The constraints and opportunities presented by the natural and man-made physical environment evaluated in the context of planning at both site-specific and regional scales are discussed. The goal of the course is not to produce environmental scientists, but rather to make planners aware of the environmental questions that should be asked and of whom. Lectures, case studies, and roundtable discussions are utilized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.



**CTRP 8255. Sustainability in Suburban Communities. 3 Credit Hours.**

The physical forms of suburban communities and the social and economic patterns that shape residents' lives make achieving sustainability in suburbia challenging and problematic. Distances between homes, businesses, and worksites are long; transportation choices are few; infrastructure needs are extensive and costly; and impacts on ecological systems can be severe. Many argue that higher-density, urban living holds our best promise for an environmentally sustainable future in the United States, but half of all Americans live in suburbia and finding sustainable solutions for them and their communities must be part of the solution. Lectures, readings, and discussions in this course address sustainability in suburban communities by covering the history of the American suburb and processes of suburbanization; architecture and housing; landscape and community design; transportation and infrastructure; built and natural environments and ecological systems; and planning, administration, and regionalism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8257. Environmental Policy. 3 Credit Hours.**

This course identifies the complexities associated with environmental politics and management from both national and international perspectives. The first part of the course discusses the basics of natural environmental processes and the difficulties of environmental policy formulation and implementation including risk assessment, watershed resource management, and public lands management. The second part describes and evaluates command and control processes, primarily focusing on air, water, and solid waste abatement. The final part examines large-scale global issues such as climate change and sustainable development and assesses the implications of energy use and the future of environmental management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8266. Sustainable Business Practices. 3 Credit Hours.**

Environmental issues and their impact on business, communities, institutions, and the general public are comprehensively explored. The course examines the need for companies to effectively manage environmental issues in light of increased public demand for businesses to take a stewardship role over natural resources and environmental protection. It provides students with a broad and practical understanding of environmental sustainability concepts, and examines how challenges associated with sustainable development are multifaceted, involving economic, social, and environmental concerns. The course explores how these concerns alter business strategies and practices and lead to new opportunities. Case studies and lectures are used to build technical proficiencies. Lectures are offered by guest experts. Note: Cross-listed with Strategic Management 5191.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8267. Water Resources Planning and Management. 3 Credit Hours.**

Water is one of the earth's most important resources. Without it we cannot survive. Yet its management is complicated and highly contentious. This course evaluates various aspects of water resources, including water quality, flooding, and water supply and allocation, and how global warming will influence the quality and quantity of future supplies. Various forms of management are evaluated, ranging from fragmented management to more integrated forms such as multi-jurisdictional river basin management and ecosystem management. Water resources planning and management is also evaluated from multiple perspectives: local, state, national and international. The course evaluates numerous case studies and includes guest speakers with national and international expertise.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8276. Regional Development. 3 Credit Hours.**

Coursework provides the fundamentals for understanding regional development and examines the theories that explain why cities and regions grow, as well as the spatial patterns of urban and regional development. In addition to theory, students are introduced to the key analytical methods that have been developed to characterize regional development patterns and predict future regional growth. By the end of the course, students have the requisite skills to complete a local development plan and have a clear understanding of the literature and tools of regional development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8355. Environmental Infrastructure Planning and Management. 3 Credit Hours.**

Introduces students to the practice of planning and managing municipal and regional environmental infrastructure programs that typically fall under the realm of a local or county department of public works or environmental planning. Covers the historical development, governing regulations, current status and innovative trends with respect to comprehensive solid waste management, wastewater treatment, drinking water supply, stormwater management, district heating/cooling systems and green energy, and multi-purpose greenways. Infrastructure finance such as capital budget, operations and maintenance, and funding are discussed. Guest speakers present case studies to complement class discussions and student-lead case study research. Open to students from all disciplines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8455. Planning Processes and Project Management. 3 Credit Hours.**

Emphasizes the integration of planning and project management and stresses the fundamentals of project management as essential for a successful planning process. Provides the student with an understanding of the framework of an effective planning process, while developing skills in project management. Topics include: creating a vision for the planning process; managing resources and costs; integrating interest groups into the planning process; measuring outcomes; and communicating results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8476. Collaborative Planning. 3 Credit Hours.**

Students examine the theories, principles, and practices of collaborative planning with a special emphasis on resolving conflicts over land-use planning issues and planning for complex environmental systems. The course emphasizes a range of collaborative planning modes, including negotiation, facilitation, and partnerships. Students engage in a series of hands-on simulations involving communicating complex concepts and building consensus with the goal of developing student skills for effective leadership of collaborative planning and management endeavors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8555. Internet and Digital Technologies for Community Engagement. 3 Credit Hours.**

Emerging technologies are directly influencing the planning and management of our urban areas in very profound and pervasive ways. Planning and related professionals increasingly are adopting new technologies to develop plans, communicate ideas and concepts, and engage citizens in the decision making process. The course introduces many fundamental technology concepts, including e-Planning and e-Government; Cybercities; e-Commerce and Economic Development; Web 1.0, 2.0, 3.x, Web Conferencing Tools; Online Project Collaboration Methods; IT Project Management; Section 508 Accessibility; Planning in Virtual Worlds; Municipal Wireless Networks and Public Spaces; and Digital Divide. Through a series of labs and assignments, students gain hands-on experience with each of these technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8655. Transportation Planning. 3 Credit Hours.**

The course presents an overview of the history of transportation in the United States and the fundamentals of present-day transportation planning and policies. It explores the influences of urban form on modal choice; accessibility and mobility of various population subsets (such as the economically and physically disadvantaged); regional and local travel demand; and the operational efficiency of different types of transportation systems (transit, highways, bicycle, and pedestrian). Coursework covers the impact of transportation investments on land use and regional population growth, and on environmental, community, and economic sustainability. It introduces students to currently used transportation planning methodologies, legal requirements, and decision-making processes. By studying actual transportation projects, students develop a plan for an assigned project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8656. Integrated Transportation and Land-Use Planning: Context-Sensitive Design Solutions. 3 Credit Hours.**

Context-sensitive design seeks to blend transportation functions with other human activities and land-use characteristics. Often transportation and land-use decisions have worked at cross-purposes due to the inconsistency of scales, the traditional focus of transportation project planning on functional and engineering concerns, and development decisions made without adequate regard to traffic impacts. This course covers basic operational and safety requirements of various transportation systems, with special emphasis on bicycle and pedestrian travel, and appropriate designs for different types of development and policy objectives, such as downtown revitalization or decreasing reliance on the automobile. The latter part of the course is devoted to a studio design project in which students apply design principles to solve a transportation and/or land-use problem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8657. Non-motorized Transportation Planning. 3 Credit Hours.**

Transportation planning in the United States has long focused on improving conditions for motorized travel, primarily by personal cars and light duty trucks. The effects of an over-emphasis on motorized travel on energy consumption, traffic congestion, and the physical form of our communities, however, have led to the promotion of non-motorized transportation - that is, travel on foot and bicycle. This course is designed to develop an appreciation of the role of non-motorized transportation in the United States; to understand the conflicts and opportunities for compatibility between different modes of transportation; and to gain skills in planning for safer, more convenient, and more appealing walking and bicycling conditions in American cities and suburbs. Class sessions consist of a mix of lectures, discussions, and individual and group exercises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8666. Travel Demand Modeling. 3 Credit Hours.**

This course provides an overview of regional transportation planning, emphasizing hands-on experience with travel demand modeling. It addresses the transportation management and planning process in support of policy development, environmental and system management, improvement programming, and impact analysis. The role of travel estimation is explored as it relates to the key stages of these undertakings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in CTRP 8655 (may be taken concurrently)

**CTRP 8755. Introduction to Emergency Management Planning. 3 Credit Hours.**

This course provides a fundamental understanding of the emergency planning process, the phases of emergency management, and the roles and responsibilities of all parties involved. Students work in a classroom environment, interacting with others on various assignments, projects, and presentations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8756. After the Disaster: Effective Planning for Continuity, Recovery and Restoration. 3 Credit Hours.**

Provides the student with the skills necessary to develop a plan for continuing operation during and immediately following a disaster or emergency situation. Addresses the planning necessary to quickly recover and eventually restore operations to a normal status. Using various disaster and emergency scenarios, the concepts of command and control, communications protocols and decision making will be applied to the process of continuing and suspending operations. Assessment techniques, table top exercises, and guest lecturers will provide the student with hands-on experience in disaster recovery.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CTRP 8840. Topics in Community and Regional Planning. 1 to 3 Credit Hour.**

Variable offerings are made from semester to semester on selected topics not part of the regular listing of courses. The topic can be in an area of specialization of a faculty member or an examination of a current development in the field. Note: A description of the current course offering can be obtained at the department office and in the schedule of classes. This course may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTRP 8850. Topics in Community and Regional Planning. 3 Credit Hours.**

Variable offerings are made from semester to semester on selected topics not part of the regular listing of courses. The topic can be in an area of specialization of a faculty member or an examination of a current topic in the field of planning. Note: A description of the current course offering can be obtained at the department office and in the schedule of classes. This course may be repeated for credit. Past courses include Suburbia: Issues and Trends; Redevelopment and Revitalization; Environmentally Sensitive Development; Issues in Local and Regional Economic Development; Community-Based Organizations and Planning; Emergency Management Planning; Urban and Regional Development; Community-Based Organizations and Planning; and Planning Processes and Project Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTRP 8860. Topics in Community and Regional Planning. 1 to 3 Credit Hour.**

Variable offerings are made from semester to semester on selected topics not part of the regular listing of courses. The topic can be in an area of specialization of a faculty member or an examination of a current development in the field. Note: A description of the current course offering can be obtained at the department office and in the schedule of classes. This course may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTRP 8870. Special Topics. 1 to 3 Credit Hour.**

Variable offerings are made from semester to semester on selected topics not part of the regular listing of courses. The topic can be in an area of specialization of a faculty member or an examination of a current development in the field. Note: A description of the current course offering can be obtained at the department office and in the schedule of classes. This course may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTRP 8889. Planning Studio I. 3 Credit Hours.**

The studio involves undertaking a planning project in cooperation with a local or regional client. Working in small groups, students synthesize the knowledge gained from previous courses in the development of an integrated approach that is appropriate to their project. The groups prepare professional-level plans and policy reports based on relevant data collection; site analysis; evaluation of location, market, transportation, environmental, financial, and schedule opportunities and constraints; and the assessment of stakeholder interests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (CTRP 5524 or CRP 5524), (CTRP 5513, CRP 5513, or CRP 8513), and (12 credits in CTRP courses numbered 5000 to 8888 or 12 credits in CRP courses numbered 5000 to 8888)

**CTRP 9883. Directed Reading/Study. 1 to 3 Credit Hour.**

Advanced reading/study tutorial is arranged between the student and a faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CTRP 9885. Internship in Planning. 3 or 6 Credit Hours.**

All students in the Master of Science in City and Regional Planning are required to fulfill 180 hours of work experience in the field of planning as an extracurricular activity or as a three-credit elective by registering for CTRP 9885 Internship in Planning. Approved internships must focus on the acquisition and application of practical skills in planning. Internship placements are at public agencies, non-profit institutions, and private firms. Internships must be approved by the City and Regional Planning program head prior to a start date. Internships require interim reports and must culminate in a report regarding the experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in (24 credits in CTRP courses numbered 5000 to 9000 or 24 credits in CRP courses numbered 5000 to 9000)

**CTRP 9889. Planning Studio. 6 Credit Hours.**

The studio involves undertaking a planning project in cooperation with a local or regional client. Working in small groups, students synthesize the knowledge gained from previous courses in the development of an integrated approach that is appropriate to their project. The groups prepare professional-level plans and policy reports based on relevant data collection; site analysis; evaluation of location, market, transportation, environmental, financial, and schedule opportunities and constraints; and the assessment of stakeholder interests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in (CTRP 5014, CRP 5014, or CRP 8014), (CTRP 5413, CRP 5413, or CRP 8413), (CTRP 5513, CRP 5513, or CRP 8513), CTRP 8013, CTRP 8016, and CTRP 8213.

**CTRP 9995. Thesis in Planning. 1 to 6 Credit Hour.**

Undertaking a master's thesis provides the student an opportunity to develop evidence of mastery of the field. Under the guidance and supervision of the course instructor and Thesis Committee, the student will develop an appropriate research question, methodology and process. The master's thesis is substantial in length and follows a knowledge-enhancement model, based on planning theory, methodology, or history. The thesis is subject to a public defense. Note: Open only to students matriculated in the MS in City and Regional Planning program who have completed the first full year equivalent of the master's program. Registration requires approval of the department chair. Students may register for one to six credits of CTRP 9995. This course may be repeated for credit, but no more than six credits of CTRP 9995 may be used as an elective for the MS in CTRP.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in (18 credits in CTRP courses numbered 5000 to 9999 or 18 credits in CRP courses numbered 5000 to 9999)

## Civil Engineering (CEE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CEE 5048. Probability and Statistics in Engineering. 3 Credit Hours.**

This course is designed to build a conceptual background in probability, statistics, and stochastic analysis. It prepares the graduate student for research in uncertainty analysis and stochastic models in engineering. It begins by building a solid integrated background on the subjects that conform uncertainty analysis in engineering: probability, statistics, and stochastic modeling. The theory is complemented with numerous exercises of application in engineering uncertainty analysis, and with computer simulations using modern computer algebra software, such as MAPLE. Students are gradually taken to more advanced subjects and eventually to the analysis of differential equations subject to random initial conditions, random forcing terms, and random parameters. Partial differential equations and nonlinear stochastic equations are treated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5058. Probability Statistics in Engineering. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5110. Special Topics. 3 Credit Hours.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 5201. Transportation Systems Management. 3 Credit Hours.**

This course covers cost-effective techniques for the rebuilding of deteriorated transportation systems; pavement management and traffic systems management; extensive use of advanced computer software packages.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5202. Transportation Engineering. 3 Credit Hours.**

This course focuses on the principal modes of transportation, including highway, rail, and air; analysis of elements of transport technology; and transportation system development, planning, design, construction, and maintenance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5203. Structural Design of Pavements. 3 Credit Hours.**

This course covers basic characteristics of different pavement structures; various modes of failure and design of pavement structures; identification and analysis of stresses; strains and deflections in flexible and rigid pavements; computation of traffic loading and volume for the structural design of pavements; engineering properties of pavement materials; pavement performance and distress; and empirical and mechanistic-empirical approaches.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5211. Bridge Design. 3 Credit Hours.**

The course covers bridge design in structural steel and reinforced concrete; application of AASHTO bridge design specifications; and analysis techniques for complex structures. Preliminary designs include investigating alternative structural systems and materials. Final designs include preparation of design calculations and sketches.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5212. Transportation Engineering Materials. 3 Credit Hours.**

Topics include physical properties of asphalt, aggregates, portland cement, portland cement concrete, and their combinations; advanced techniques in material characterization in the lab and the field; material variability, sampling, and statistical techniques; and the impact of these properties on their characterization of the design, construction, rehabilitation, and management of transportation facilities, including portland cement concrete pavements with steel reinforcement; construction methodologies, recycling, and energy consideration; and application of the state-of-the-art computer software packages.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5221. Intelligent Transportation Systems. 3 Credit Hours.**

Coverage embraces the multidimensional upgrades needed for highway and vehicles for developing intelligent transportation systems. Contributions from important related fields such as telecommunications, safety, management, urban and regional planning, and economics where they interface with transport are included. Several case studies constitute an integral part of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5231. Airport Engineering. 3 Credit Hours.**

This course deals with the various aspects of airport engineering, planning, design and development of 21st century airports. The course covers airport master and system planning, airside layout, landside access design, passenger and cargo facilities, terminal design, drainage and pavement design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5241. Pavement Management and Traffic Systems Management. 3 Credit Hours.**

The course covers development of management methods for analysis, planning, design, construction, maintenance, and rehabilitation of pavements and traffic systems. The objective functions include creation of more efficient use of existing facilities through improved management and operation of vehicles and roadway.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5244. Introduction to Geosynthetics. 3 Credit Hours.**

This course will enhance your critical understanding of Geosynthetic Materials used in civil engineering applications and develop the knowledge and skills required for designing and applying geosynthetic materials in civil engineering and environmental applications. Geosynthetics properties, testing of properties, design of geotextile, geogrids, geonets, and geomembranes for applications in separation, pavement design, embankment and retaining wall reinforcement, soil stabilization, filtration, drainage and liquid barrier, construction guidelines and case histories. The module will also develop critical understanding of the processes and materials used for the manufacture of geosynthetic materials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5251. Pavement Rehabilitation and Maintenance. 3 Credit Hours.**

The course covers fundamental behavior of materials used in building pavements. These materials include aggregate mixtures, asphalt binders and mixtures, and Portland cement concrete. The course covers methods of field construction and quality control of materials and their impact on long term performance. The course helps students understand the role of material properties in design of pavements including cost analysis. Students will learn testing methods, selection criteria, and standard specifications. Finally, the students will use accumulated knowledge through the course to understand strategies of pavement rehabilitation and maintenance. Principles of asset management will be introduced in the course to optimize maintenance and rehabilitation interventions for improving longevity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5301. Construction Administration. 3 Credit Hours.**

The course focuses on the engineering and construction industry; the basis of construction contracting; organizational structure and its functions; management structure and its functions; office administration, employment practices, and labor relations; organizational financing and accounting; and safety practices, risk management, and industrial insurance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5302. Engineering Project Management. 3 Credit Hours.**

This course provides an overview of the basic principles underlying all methods of project management, including project estimating, planning and scheduling, budgeting, cost accounting and cost control, project documentation, tracking and resource leveling. It also focuses on utilization of project management software packages for selected civil engineering projects; different types of projects; organizing the project management functions; setting up the project team; starting up and managing engineering projects; and ensuring the effective completion of the project on time, within budget, and meeting specifications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5303. Construction Financial Management. 3 Credit Hours.**

Coverage includes project development in construction, project budgeting and job costing approaches, cost management and financing alternatives, evaluation of financial and accounting objectives required with each project, forecasting cash needs and profit, and financial reporting procedures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5312. Construction Equipment Management. 3 Credit Hours.**

This course focuses on the concepts and theories of construction equipment operation, ownership costs, and their relationship to production systems; analysis of depreciation and fixed costs for equipment pricing on construction projects; selection and use of construction equipment; and equipment economics and financing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5321. Geotechnical Engineering. 3 Credit Hours.**

This course deals with soil testing, site investigation, design of shallow and deep foundations, earth retaining structures, and advanced topics in soil behavior and stability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5411. Structural CADD Systems. 3 Credit Hours.**

Topics include behavior and analysis of simple and complex structures subjected to dynamic loads; using exact and approximate analytical techniques; determination of free response and force response using modal superposition and numerical integration; review of the characteristics of earthquakes with consideration of site and structural parameters on the response of buildings; and application of analysis and design procedures required to achieve earthquake-resistant structures in accordance with building code specifications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5421. Structural Dynamics. 3 Credit Hours.**

This design course addresses developments in theory and practice of earthquake engineering. It familiarizes students with new techniques of analysis and seismic design. Students learn advanced concepts in applied mathematics, especially structural dynamics and application of seismic building and bridge codes. Familiarity with differential equations, matrix methods of analysis, non-linear equations, eigenvalue solutions, and finite elements modeling are required. Students are instructed to learn and apply new software for dynamic analysis. Laboratory work includes the study of experimental models such as for bridge piers (frames, walls, and hammerhead columns) using an MTS machine for applying dynamic loads.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5431. Behavior and Design of Steel Structures. 3 Credit Hours.**

The course's design objective is to develop within the student an awareness of the fundamentals required to produce safe, functional, and economical steel structures, which are in conformance with national building codes and industry specifications and standards. This is an advanced course in structural engineering intended to develop professional-level competence in the design of steel-framed buildings, utilizing the most up-to-date design code.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5432. Structural Mechanics. 3 Credit Hours.**

Topics include principles of mechanics and stress and strain at a point; analysis of statically determinate and indeterminate structures with static and moving loads using energy methods and force and deformation methods; beam theory, shear center, unsymmetrical bending, introduction to numerical methods, and computer techniques; and introduction to the use of the GT-STRUDAL and ANSYS computer programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**CEE 5433. Behavior and Design of Masonry Structures. 3 Credit Hours.**

Coverage includes the fundamental principles of masonry behavior and design. In this course, up-to-date information about material testing, research methodology in the area of masonry structures, and codes are presented. The first part of the course presents the fundamental behavior and characteristics of masonry materials and masonry assemblages, the deformational characteristics of brick and block masonry, performance of load-bearing wall systems and shear wall system, the design of unreinforced and reinforced masonry elements, and the construction details of masonry structures. The second part of the course concentrates on the seismic resistance of masonry structures, prestressed masonry, and applied design of low and high-rise buildings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5434. Behavior and Design of Reinforced Concrete Structures. 3 Credit Hours.**

Behavior, analysis, and design of advanced reinforced concrete structures and components including columns subjected to flexure in one or two direction, slender columns, floor systems including two-way slabs, and analysis, design application using modern software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5445. Earthquake Engineering and Seismic Design. 3 Credit Hours.**

Basic knowledge of and introduction to earthquake engineering, seismic design and analysis methods, and seismic design based on International Building Code (IBS), ASCE 7 - Minimum Design Loads for buildings and other structures, introduction of material specific design requirement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5446. Advanced Concrete Technology. 3 Credit Hours.**

This course focuses on theoretical and practical aspects of concrete technology. It covers the principles of cement and concrete production, concrete mixture design, strength and durability requirements (i.e., performance engineered mixture design), and environmental effect. It introduces concepts of construction with green cementitious materials (e.g., supplementary and alternative cementitious materials). Specific concepts include understanding the mechanisms, test methods, and evaluation procedures of main durability and sustainability issues in concrete infrastructure. Concrete related guidelines and specifications will be introduced.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5531. Life Cycle Assessment and Carbon Footprinting. 3 Credit Hours.**

Life Cycle Assessment (LCA) examines the environmental impacts of products, processes and policies beyond their direct production. Cradle to grave analysis in this manner provides the full picture that is needed to understand the true impact. This course provides an overview of Life Cycle Assessment principles and practice in relation to environmental and energy concerns. Regulatory and economic decision support tools and software analysis packages will be included. The course is structured such that students will start an LCA from the beginning of the course and progress on it as topics are covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Engineering.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5621. Engineering Hydrology. 3 Credit Hours.**

Quantifying water flow in watersheds is a crucial step in the design of environmental facilities, such as drinking water treatment plants, and in delineating floodplains. This course deals with the water cycle over watersheds by addressing the motion of water masses in the atmosphere and in surface and subsurface systems. Students who successfully pass this class are able to deal with most hydrology problems treated in the industry sector.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5622. Fate of Pollutants in Subsurface Environments. 3 Credit Hours.**

This course focuses on integrated chemical, physical, and microbiological principles of contaminant fate and transport processes necessary in the use of engineered approaches toward selecting and implementing subsurface cleanup options. It also covers abiotic processes, biotic processes, empirical models, and vulnerability mapping.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5623. Contaminant Dynamics in Urban Streams. 3 Credit Hours.**

This course will focus on environmental systems near the air:water and water:sediment interfaces. These systems are by definition boundary or edge systems and are therefore exceptionally important to aquatic ecosystem functioning. After briefly discussing the air:water interface in rivers and lakes, the course will focus on the water:sediment interface. It is here that steep gradients in chemical concentration can be found and significant nutrient cycling occurs. In addition, studies have shown that significant ecosystem productivity and respiration occurs within the bed sediments of flowing water. The course will discuss the concept of transient storage and hyporheic exchange; issues surrounding modeling of transient storage and hyporheic exchange; phosphorus and nitrogen biogeochemistry within the hyporheic zone; and biotic/abiotic nutrient cycling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5631. Environmental Hydrology. 3 Credit Hours.**

Topics include the physics of surface and subsurface circulation and storage of water and the transport of contaminants in watersheds, soils, aquifers, rivers, the ocean, and the atmosphere, as well as the laws and equations that govern the recharge, flow, storage, and discharge of water in natural environments. Emphasis is given to qualitative analysis and quantitative evaluation methods of the different hydrologic processes with potential applications in surface and groundwater resources engineering, and environmental analysis. Analytical and numerical procedures to solve the arising equations are presented, along with the most commonly used models to solve water resources problems. Also studied are engineering methods for the sustainable use of water resources; engineering methods for the containment and treatment of surface and groundwater pollution; and the restoration of aquifers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5641. Urban Streams and Stormwater Management. 3 Credit Hours.**

Stormwater management has become a significant issue in recent years. In the past, the typical thinking was "get it out of my town," which resulted in downstream communities suffering the brunt of poor or inadequate management. In fact, only the rate of runoff was addressed, not the volume nor the quality of that runoff. In urban areas, the volume of runoff increases significantly due to additional impervious cover (e.g., pavement and rooftops), and urban stormwater runoff causes water quality degradation due to excess amounts of nutrients, metals, bacteria, and sediment. This course addresses the impact of improperly controlled runoff on urban streams and how the rate, volume, and quality of urban stormwater runoff can be properly controlled through appropriate Best Management Practice (BMP) implementation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5701. Physical Principals of Environmental Systems. 3 Credit Hours.**

Basic principles of process engineering as they relate to pollution control are studied, including heat and mass transfer; mixing, chemical, and biological reactions; and reaction and kinetics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5702. Chemical Principles of Environmental Systems. 3 Credit Hours.**

This course focuses on the essential chemical principles necessary to understand the nature of commonly occurring pollution problems and engineering approaches to their solutions; thermodynamics, chemical equilibria, acid-base chemistry, carbonate system, Redox chemistry, and adsorption/desorption phenomena.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5703. Mathematical Modeling. 3 Credit Hours.**

This introductory graduate course focuses on numerical modeling of engineering systems. It covers standard mathematical techniques, such as interpolation, numerical integration, numerical solutions of ordinary and partial differential equations, parameter estimation, and optimization. Students will have to use an algorithmic programming language, such as Matlab, Fortran, or C++.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5711. Air Pollution Control. 3 Credit Hours.**

Topics include theory and principles of the design and operation of the major categories of air pollution control equipment, and an introduction to dispersion modeling. An extensive design problem is a major course component.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5721. Weather Monitoring and Forecasting. 3 Credit Hours.**

This online course will offer a basic understanding of measurements of the atmosphere used for weather analysis and forecasting. Data from instruments such as weather balloons, radar, lightning mapping arrays, and satellites will be included. Special emphasis will be on interpreting satellite imagery and use in weather forecasting and warnings. Students will have the opportunity to learn to interpret real-time data online, and to make their own weather forecasts. The course will be taught primarily online, though one or two on-campus meetings may be required during the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5731. Solid Wastes Engineering. 3 Credit Hours.**

Coverage includes engineering principles of solid waste generation, characterization, collection and transport, separation, source reduction and recycling, and physical chemical and biological treatment strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5751. Water and Wastewater Treatment. 3 Credit Hours.**

This course covers the design and analysis of common unit operations at water and wastewater treatment plants such as type I-IV sedimentation, coagulation and flocculation; filtration; disinfection, and biological processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5761. Environmental Chemistry. 3 Credit Hours.**

This is an advanced course focusing on examination of processes that affect the behavior and fate of anthropogenic organic contaminants in aquatic environments. The lectures will begin with intermolecular interactions and thermodynamic principles governing the kinetics of some of the important chemical and physicochemical transformation reactions of organic contaminants. From this class, students will learn to predict chemical properties and to apply the knowledge of chemical properties and transformation reactions to assess the environmental fate of organic contaminants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5762. Environmental Organic Chemistry. 3 Credit Hours.**

This is an advanced course focusing on examination of processes that affect the behavior and date of anthropogenic organic contaminants in aquatic environments. The lectures will focus on intermolecular interactions and thermodynamic principles governing the kinetics of some of the important chemical and physiochemical transformation reactions of organic contaminants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5771. Chemistry for Environmentally Sustainable Engineering. 3 Credit Hours.**

This course is a survey of environmental chemistry as it relates to the development of environmentally sustainable engineered systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5772. Sustainable Development and Industrial Ecology. 3 Credit Hours.**

As an introduction to the concepts of industrial ecology and sustainability, the course focuses on an interdisciplinary framework for the design and operation of industrial systems as living systems interdependent with natural systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5773. Sustainability Aspects of Water Supply and Wastewater Treatment. 3 Credit Hours.**

Major environmental, economic and social trends are influencing the application of sustainability principles within the engineering profession. This course will examine the sustainability principles that will transform future engineering practice regarding drinking water supply and the treatment of wastewater. The term, wastewater, will be replaced by one more representative of the fact that 'wastewater' is in fact a largely untapped source of raw materials. It is in the areas of energy recovery, small molecule harvesting, and the water energy nexus where the next generation of environmental engineers will have a major impact on meeting societal needs regarding the provision of adequate drinking water as well as industrial requirements for this increasingly scarce resource. The course will introduce the underlying principles of sustainability directly relevant to meeting this need. Case studies will evaluate the above mentioned principles and the applicable areas of energy, chemical intermediates, and reclamation of previously used water, with a focus on dealing with emerging microconstituents in the water environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5774. Membrane Separation in Wastewater Treatment. 3 Credit Hours.**

The course describes in detail membrane separation technology for a wide range of applications including water treatment and desalination. The course covers: global water shortages and need for membrane technology, microfiltration, ultrafiltration, nanofiltration and reverse osmosis membrane processes and current applications in water treatment, operational and energy issues, limitations, fouling and membranes processes coupled with biological treatment. The course is valuable as a prerequisite to more advanced research in environmental engineering, as a technical education to stimulate graduate students' interest in environmental sustainability, and as an introduction to environmental constraints that are increasingly important to other engineering disciplines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5792. Biological Principles of Environmental Systems. 3 Credit Hours.**

Applications of biological processes in environmental engineering are historic and eminently modern, from traditional ones like activated sludge and anaerobic digestion to emerging applications like detoxification of hazardous chemical and biofiltration of drinking water. This course is designed to identify the biological principles essential for the understanding and designing of biological processes used for environmental protection and improvement. While many biological processes are being employed and developed by environmental engineers, there is no place in the standard civil engineering curriculum for detailed discussion on the underlining principles and their applications. This course emphasizes the comprehension of theoretical concepts and their application in a variety of situations. It covers the fundamental biological principles by their practical applications in engineered and natural environments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5793. Environmental Biotechnology. 3 Credit Hours.**

Biotechnology plays a central role in environmental science and engineering, including wastewater treatment, pathogen control, and biodegradation. The objective of the course is to provide environmental engineers and scientists with advanced concepts and quantitative tools that are necessary for understanding environmental processes and designing environmental protection systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5794. Advanced Biological Wastewater Treatment. 3 Credit Hours.**

Biological processes play a central role in wastewater treatment and are used in every wastewater treatment plant to remove organic compounds, nutrients, and other compounds from the water before discharging it back to the environment. The objective of the course is to provide environmental engineers and scientists with advanced concepts and quantitative tools necessary for understanding environmental processes and designing environmental treatment systems related to wastewater including advanced aerobic and anaerobic processes. The course integrates the use of microbiological principles into engineering wastewater treatment process. The course will provide a better understanding of interesting and complex environmental topics related to sustainable environmental remediation and protection. The course is valuable as a prerequisite to more advanced research in environmental engineering, as a technical education to stimulate graduate students' interest in environmental sustainability, and as an introduction to environmental constraints that are increasingly important to other engineering disciplines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5795. Aquatic Toxicology in Environmental Engineering. 3 Credit Hours.**

This course provides an introduction to the basic concepts of toxicology necessary to understand the effects of contaminants in the water environment. Specific topics include sources and classes on aquatic contaminants, environmental chemistry that influences behavior in the aquatic environment, the disposition and metabolism of these substances that affect their toxicity, and the physiological response of exposure in aquatic species and humans. The course will provide an overview of aquatic toxicity testing methods and application of toxicity data in the risk assessment of aquatic exposures to emerging contaminants, such as pesticides, pharmaceuticals, and natural products. Case studies will cover historical and contemporary examples of contaminant-driven effects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5799. Environmental Engineering. 3 Credit Hours.**

This course focuses on the generation, transport, effects, and control of environmental pollution within and across media, as well as problem analysis and control design. Theoretical development is augmented with applications of state-of-the-art software packages. Students complete a term project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5811. Advanced Soil Mechanics. 3 Credit Hours.**

Advanced concepts related to behavior of soil as an engineering material. Topics include consolidation magnitude and time rate, evaluation of secondary compression, mitigation of consolidation of settlements, shear strength of soils and other geologic materials, principles of critical state soil mechanics, and normalization of undrained shear strength.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5821. Foundation Engineering. 3 Credit Hours.**

Principles of foundation engineering and design. Topics include soil stress distributions, bearing capacity of shallow (footings, mats) and deep foundations (driven piles, drilled shafts), tolerable settlements, construction techniques, and field quality control.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5822. Earth Retaining Systems. 3 Credit Hours.**

Principles related to design of earth retaining systems and stability of earth slopes. Topics include lateral earth pressure theory, temporary and permanent retaining structures, in-situ reinforcement, and braced excavations. Shear strength of cohesive and granular soils and slope stability analysis using limited equilibrium, design charts and numerical methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 5823. Geotechnical Earthquake Engineering. 3 Credit Hours.**

An introduction to seismology and earthquake hazards in geotechnical engineering. Topics include plate tectonics and earthquake faulting, strong ground motions, dynamic soil properties, and characterization of design ground motions based on deterministic and probabilistic seismic hazard analysis. Analysis of earthquake-induced ground failures, seismic design of earth retaining systems and slopes, and effects of soil-structure interaction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 8302. Advanced Project Management. 3 Credit Hours.**

This course covers analysis of project control, job budgeting and costing, safety and risk management, bidding strategies and management, construction information management, and case studies of construction projects and company profiles.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CEE 8701. Advanced Physical/Chemical Treatment Processes. 3 Credit Hours.**

There are numerous sites in the environment where surface water, ground water or soil is contaminated with toxic chemicals. In addition, many industrial wastewater and air emissions contain toxic chemicals which required treatment. Due to the chemical toxicity, we rely on physical and chemical processes for the decontamination of the fluid stream. Some of the commonly used treatment technologies are carbon absorption, air stripping and scrubbing. Of late, advanced oxidations processes have been examined and implemented as well. These processes are also used to produce high quality drinking water. The course deals with the analysis and design of some commonly used advanced physical/chemical processes for treatment of contaminated water and air. This course complements, and builds upon the fundamental science discussed in other courses in the curriculum on physical and chemical principles. In this course, emphasis will be placed on understanding the basic science, and the engineering design principles. Treatment of water, wastewater and air using processes such as air stripping, scrubbing, carbon absorption and advanced oxidation processes will be discussed, and design of the treatment systems will be conducted.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 8702. Advanced Chemical Principles of Environmental Systems. 3 Credit Hours.**

This is an advanced course focusing on examination of processes that affect the behavior and fate of anthropogenic organic contaminants in aquatic environments. The lectures will focus on intermolecular interactions and thermodynamic principles governing the kinetics of some of the important chemical and physiochemical transformation reactions of organic contaminants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 8703. Computer Modeling of Environmental Transport. 3 Credit Hours.**

Topics include theory and computer modeling of transport and diffusion within and across media; and application of models to problems of air, water, and soil pollution with case studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CEE 9182. Independent Study I. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by MS/MSE students and once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 9282. Independent Study II. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 9991. Directed Research. 1 to 6 Credit Hour.**

Under the guidance of a faculty member, the student conducts independent research on a selected topic in engineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have completed their coursework but who have not yet passed both the Ph.D. Preliminary Examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 9995. Project. 1 to 3 Credit Hour.**

A project is assigned with the approval of the Civil and Environmental Engineering Graduate Committee and conducted under the supervision of a graduate faculty advisor. An oral presentation in an open seminar and a written report are required to complete the independent project. Projects related to industrial applications are encouraged. For non-thesis students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 9996. Thesis. 1 to 3 Credit Hour.**

Master's thesis. May be taken twice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have passed both the Preliminary and Qualifying Examinations but who have not been elevated to candidacy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CEE 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is intended only for those students who have achieved Ph.D. Candidacy status. A minimum of 6 semester hours is required for graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Clinical Sciences and Health Informatics (CSHI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CSHI 5201. Clinical Data and Analytics. 3 Credit Hours.**

This course is designed to train students in the fundamentals of manipulating and conducting analyses of clinical data. Basic statistical principles and big data analytics will be discussed briefly, though the main focus of this course is understanding and working with "raw" clinical and administrative data sources to develop structured data sets suitable for analysis by more advanced techniques. Students will gain insight into the unique idiosyncrasies of the healthcare setting that impact the interpretation of analyses of clinical data. This class will explore in detail an anonymized patient data set including demographics, clinical encounters, diagnoses, medications, and laboratory results. The class will analyze clinical data sets with special focus on medication management, patient adherence, healthcare disparities, trends in health utilization, disease management, and quality measurement. Challenging issues in dealing with "dirty data" will be addressed. The course will also explore the impact of data modeling decisions and clinical ontology choices on the conclusions that can be drawn from clinical analytics. Through the course, students will learn the many assumptions that are incorporated into even seemingly straightforward queries, and the impact of these assumptions on the interpretation of results. Students also will be able to test the generalizability of their knowledge through analyses of additional publicly available clinical data sets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSHI 5202. Applications of Data Science to Clinical Medicine and Medical Research. 2 Credit Hours.**

Data science, at the intersection of statistics and computer science, provides cutting edge tools for analyzing large data sets to provide predictive and causal models. These tools have been used extensively in the fields of econometrics and advertising (e.g. Google and Facebook); the application of data science to medicine is in its infancy, however, with the increasing availability of large clinical data sets, the opportunity to mine these sets for information has never been greater. While software engineers and applied mathematicians have the skills to use and develop these tools, they lack the content expertise needed to apply this knowledge to medicine. The purpose of this course is to provide graduate student/researchers in biomedical sciences and clinical research staff an opportunity to develop sufficient skills in modern data science to carry out research using large databases. It is assumed that the student has no training beyond introductory courses in statistics and/or epidemiology; no significant programming experience is required.

**Field of Study Restrictions:** May not be enrolled in one of the following Fields of study: Health Informatics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## College of Liberal Arts (CLA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.



**CLA 5001. Language Study for Graduate Students. 2 to 4 Credit Hours.**

Language Study for Graduate Students introduces students to the elements of grammar, syntax, style, and translation of languages necessary for graduate work in a variety of fields. Instruction is tailored to students' needs, and may include elementary grammatical study, reading comprehension of scholarly and literary texts in the target language, conversation, and prose and oral composition. This course is designed to assist graduate students who need further preparation for their required language exams, but it will not be used for credits towards degree requirements. Students must consult department chair/program director for proper language placement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CLA 5019. Introduction to Cultural Analytics. 3 Credit Hours.**

This course introduces students to research methods used to study cultural objects in digital form. The shift from print to digital materials, and from museum-based artifacts to digital reproductions, has profound implications for research in human culture. It creates new possibilities for research questions by making it possible to employ computational research methods for the first time. This course teaches students to understand the strengths and limitations of each method. Using techniques like textual analysis, network analysis, GIS, 3D-modeling, virtual reality, and critical making, researchers can investigate different aspects of their materials and discover patterns that are imperceptible without computational analysis. It provides students an overview of research methods in cultural analytics and gives them the opportunity to explore the possibilities and limitations implicit in working with cultural objects in digital form. By the end of the semester, students will understand the range of data types used in cultural analysis, the different tool types available to work with them, and the major theoretical implications inherent in these new processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CLA 5999. Research Experience. 0 Credit Hours.**

Research Experience provides graduate students laboratory experiences/research practices prior to undertaking independent, directed, master project, master's thesis, or dissertation research. This course allows graduate students the opportunity to learn to use laboratory equipment, designing and carrying out an experiment(s), collecting preliminary data, field experiences, and participation in laboratory meeting, etc. with faculty which may lead to identifying a faculty mentor. The course will be graded as Pass or Fail. The Research Experience is a non-repeatable course. After the completion of this Research Experience course, students will need to be enrolled in independent study, directed research, master's research, master's thesis, dissertation proposal, or dissertation if they continue in an active research program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CLA 8985. Teaching in Higher Education: Liberal Arts. 1 to 3 Credit Hour.**

This course is required for any student seeking Temple's Teaching in Higher Education Certificate. The course introduces current research on learning and human development, best teaching practices, and reflective approaches to teaching. It includes experiential components, including peer review of teaching and syllabus creation. All topics are considered through the lens of teaching in the Liberal Arts. Students may enroll without prior teaching experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 3 credit.

## College of Public Health & School of Social Work (CHP)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CHP 5001. Grad Research I. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## College of Science and Technology (SCTC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SCTC 5100. Special Topics. 1 to 4 Credit Hour.**

This course will allow the College of Science and Technology to offer a variety of graduate courses that are broad and not discipline specific examples include courses in integrated science or technology or STEM education. This course may also be used for a variety of topics that serve CST programs that offer teacher professional development focused on STEM disciplinary knowledge.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Communication Management (CMGT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CMGT 5001. Communicating Organizational Leadership. 3 Credit Hours.**

This course focuses on reaching your leadership potential by assessing personal leadership styles and strengthening them through effective communication. You will understand how subtleties in communication and relationship management may have a huge impact on how an organization is run, defined and perceived. We will examine the forms of power and influence and how to become a trusted advisor with senior executives. This course is designed to help you shape a better future for yourself and the communities you serve.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5002. Leadership in Crises and Conflict Management. 3 Credit Hours.**

Crisis and conflict can sharpen the thinking of your teammates, spark creativity and galvanize a virtual dispersed team. Or it can leave teammates speechless, defensive, squabbling and discouraged. Your leadership can make the difference. This course will show you how to step in, reach out and take charge of contentious issues, whether they surface in live meetings, e-mail volleys or teleconferences. It will equip you to surface the "real issues" that need to be faced and resolved, before they create a crisis. It will show you how to bridge cultural, personality, age, gender and professional differences to get the best of each other's thinking. And do all of this in a way that increases your credibility and advances your career.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5003. Leading Diverse Teams. 3 Credit Hours.**

This program consists of 7 sessions designed to prepare individuals to both lead with pragmatic skills and, in addition, develop a theoretical understanding of the cultural, social, and communication dynamics at play within a highly diverse teamwork environment. The program will provide a rigorous theoretical framework for understanding how to work with a dynamic and diverse cross section of people who are brought together with specific skills and expertise to design and implement major organizational initiatives. Further, participants will be exposed to specific organizing structures that are used, including employees working together in multi-function, cross-geography and cross time zone teams.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5004. Cross-Cultural Leadership. 3 Credit Hours.**

This course takes a communication approach to addressing the challenges and opportunities created by local and global leaders in fostering cross-cultural perspectives: providing a framework for looking at culture and leadership from a communication perspective; looking at the role of leadership in developing the needed competencies among organizational members for successful cross-cultural communication; and, proposing strategies for developing and maintaining cross-cultural communications for successful global undertakings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5101. Conflict Management Processes in the Workplace. 3 Credit Hours.**

This course provides a communication perspective on major third party intervention processes that are involved in organizational and workplace dispute systems and conflict management. Specifically, the course focuses on looking at the discursive processes that create meaning and resolve conflict through a third party involvement in ongoing conflict. Third party interventions for interest-based, rights-based and power-based approaches to dispute resolution are included. Specific attention is given to interest-based intervention processes including facilitated negotiation, conflict coaching, mediation, and facilitation. For these processes narrative theory foundations of these interventions are emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5102. Designing Workplace Dispute Systems. 3 Credit Hours.**

This course introduces the theory and research on designing dispute resolution systems for complex organizations and the role of the conflict specialist in designing and assessing these systems. The course includes an analysis of organizational conflict dynamics so that dispute systems are designed to fit the workplace context and the conflict challenges in that workplace. Public sector and private sector organizations are considered, with emphasis on dispute systems for US organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5201. Consulting and Consultation in Public Relations. 3 Credit Hours.**

Whether operating externally or internally, and because of their unique position of viewing organizational environments and contexts among a wide range of stakeholders, communicators who wish to advance in their careers need to understand the role of a communications consultant to senior managers and executives. This course is designed to equip students with the knowledge and skills to hone their consultative abilities and become a valued and trusted voice to help executive decision making. This course will review the history and rise of consulting within organizations starting in the first-third of the 20th century, theories of effective influence and persuasion, what senior executives want and expect from their communication consultants, to the knowledge and skills communication consultants need to have so their counsel is taken seriously and valued by their clients and organizations. The course will consist of readings, discussions, simulations, and assignments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5202. Storytelling through Innovation. 3 Credit Hours.**

Storytelling through Innovation examines how technological advancement is impacting the field and communication with publics. Specifically, the course will focus on two ongoing areas of potential significant change in the way public relations professionals create messaging and storytelling to influence attitudes and behaviors: artificial intelligence and deep fake technology, and the ethical issues surrounding them that professional communicators should be dealing with. The concept of purpose will also be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5203. Law and Ethics in Public Relations. 3 Credit Hours.**

Law and ethics are crucial components of strategic communication practice. This course explores and supplies you with critical knowledge of these areas through theoretical perspectives; examination of essential and relevant law impacting professional communicators; analyses of ethical issues confronted by strategic communication professionals, organizational leaders, and community influencers; exploration of guidelines for legal compliance; discussions and case studies of ethical reasoning and practical, philosophical, and theoretical concerns affecting everyday matters of moral choice and of moral judgment; and current trends on these topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 5583. Directed Readings in Communication Management. 1 to 3 Credit Hour.**

This course provides study in particular aspects of communication management under the direct supervision of a full time graduate faculty member. No more than three semester hours of directed study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 3 credit.

**CMGT 8101. Data Driven Insights. 3 Credit Hours.**

Some of the most critical skills in modern communication management include a strong understanding of research methods, digital analytics, data driven insights, and performance evaluation. This course introduces you to these concepts, key metrics and their meaning. You will learn how to connect communications data to corporate goals, analyze digital metrics, find data driven insights, and present the data story in a compelling way. This course provides students with the basics of digital tools and the key metrics analyzed for communication disciplines. Students will learn some of the most common digital measuring and analytical tools in the industry and become better prepared for the modern communication world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 8103. Organizational Communication. 3 Credit Hours.**

An organization is only as effective as its communication. Poor communication dynamics impact everyone within an organization, from the Chief Executive Officer (CEO) to the evening maintenance staff. This course will approach organizational communication from three lenses: Power, networks of association, and ethical standards. It will offer an overview of a diverse range of communicative acts engaged within an organization at the individual, dyadic (i.e. two people), small group, and meso (i.e. organizational) levels. Students will also focus on how communication is enacted within and between these levels, and how these dynamics impact an organization achieving its goals. The digital, social, and mobile communication revolutions have not only created new opportunities for an organization to improve its communication effectiveness, but present a variety of challenges as well. This course will expose students to the risks and rewards provided by emerging technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 8105. Social Responsibility in Corporations and Not-for-Profit Organizations. 3 Credit Hours.**

Corporate Social Responsibility (CSR) refers to a company's commitment to allocate resources to benefit society and the environment. The contributions may come in the form of financial support, employee time or socially beneficial business practices. At the heart of the matter are competing loyalties. Companies may have loyalties to their communities and the natural environment, but they must also be loyal to their shareholders and employees who rely on them to remain profitable. Ethically balancing loyalties in a company's relationships with publics as diverse as environmentalists, government agencies, unions, employees, stockholders, consumers and critics and advocates is a significant responsibility for public relations practitioners, and can have long-term impact on a company's financial performance, employee moral and productivity, and image, identity and reputation. This course introduces students to theories behind the concept of corporate social responsibility, and involves an examination of whether organizations should expand their focus from serving stockholders to also considering the impact of the firm's activities on diverse stakeholders. Practicing CSR requires a corporation meld business goals with societal expectations. To do so means addressing complex questions such as: What obligations do businesses have to the societies in which they operate? Can the interests of corporations and their outside stakeholders be aligned, or are they in inherent conflict? This course examines these and other questions without prescribing simple solutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 8106. Communication Theory for Professionals. 3 Credit Hours.**

This course introduces students to the concepts and principles of significant theories in the field of communication. The theories covered in this class are specifically chosen to enhance a student's understanding of the contemporary professional workplace experience. This course focuses on the social contexts and social dynamics that shape the modern organization. These contexts and social dynamics include interpersonal, organizational, group communication, mass media as well as persuasion, culture, and social media. An emphasis is placed on integrating these theories into the student's daily communication practices, areas of interest, and/or professional development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CMGT 8109. Final Project. 1 Credit Hour.**

In this final project, each student will draw upon what s/he has learned in the M.S. in Communication Management program and apply it to a real-world situation. The final project will utilize specific skills, information, and concepts to solve a critical communication problem (structural and/or procedural) affecting an organization's ability to communicate efficiently or effectively at internal and/or external levels. In solving a problem, your strategic management plan needs to account for organizational employees, stakeholders, and customers. The format is a 20 minute video-recorded PowerPoint oral presentation to be submitted to the Department of Communication and Social Influence project evaluation committee.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Communication Sciences and Disorders (CSCD)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **CSCD 5411. Psycholinguistics. 3 Credit Hours.**

This course presents information about the processing and use of language including language acquisition, lexical retrieval, syntactic parsing, and language production in children and adults with normal and disordered communication systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **CSCD 5505. Issues in Linguistics. 3 Credit Hours.**

This course critically investigates major intellectual trends in the recent history of linguistics and their relationship to contemporary issues in philosophy, psychology, and anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **CSCD 5511. Bilingualism: A Lifespan Perspective. 1 Credit Hour.**

In the field of speech and language pathology, culturally and linguistically diverse (CLD) children have a higher rate of misdiagnosis than monolingual Mainstream American English (MAE) speaking children of the same age, due to biased standardized assessments and the need for more culturally-competent clinicians to evaluate and treat these populations. This course is designed to provide students with a survey of the typical bilingual experience across the lifespan. Students will learn how bilingualism is understood across contexts, including different language parameters (i.e., semantics, phonology, syntax), as well as acquisition, disorder and typical aging. Content will be presented from clinical, developmental, neurolinguistic and sociolinguistic perspectives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **CSCD 5521. Foundations in Child Language Disorders. 3 Credit Hours.**

This course reviews theory, research and clinical issues concerning disorders of language in young children. Major categories of language disorder such as emotional disturbance, mental retardation, hearing loss, and specific language impairment are considered. Treatment and assessment techniques are reviewed and evaluated.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

#### **Pre-requisites:**

CSCD 3301|Minimum Grade of C|May not be taken concurrently.

### **CSCD 5522. Foundations and Management in Phonological Disorders. 3 Credit Hours.**

This course presents information and experiences to prepare students to assess and treat individuals with phonological disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **CSCD 5524. Foundations and Management of Motor Speech Disorders. 3 Credit Hours.**

This course covers assessment, diagnosis, and management of motor speech disorders such as dysarthria and apraxia of speech in children and adults.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CSCD 5522.

**CSCD 5525. Foundations and Management in Fluency. 3 Credit Hours.**

This course surveys the characteristics and theories on the nature of stuttering and reviews the principles and practices of assessment and intervention strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

CSCD 3233|Minimum Grade of C|May not be taken concurrently.

**CSCD 5527. Foundations and Rehabilitation of Language and Cognitive Disorders in Aphasia. 3 Credit Hours.**

This course provides an overview of acquired neurogenic language disorders and the ways in which these disorders have historically been described and explained. Approaches to diagnosis and treatment of adult language disorders and the evolution from neuroanatomical to cognitive and social models are discussed. The course begins with a review of the etiology and neuroanatomy underlying aphasic syndromes. The classical, neuroanatomical view of acquired language disorder is described, followed by an overview of syndrome classification. This is followed by a detailed review of cognitive-psycholinguistic models of language and communication disorders as well as the life participation approach to rehabilitation of communication disorders. The remainder of the course provides a review of specific language disorders associated with neurological etiologies (especially stroke-based aphasia), their effects on comprehension and production of oral and written language and specific intervention approaches. The course also offers a review of current research that focuses on impairments of cognitive processes that support language processing such as short-term memory (STM) and executive processing.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 5528. Voice Disorders: Theory and Analysis. 3 Credit Hours.**

This course acquaints the student with the symptomatology and disorder complexes related to phonation and with the philosophies and methods used in the treatment of voice disorders, including cleft palate and alaryngeal voice.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(CSCD 3233|Minimum Grade of C|May not be taken concurrently  
AND CSCD 3235|Minimum Grade of C|May not be taken concurrently)

**CSCD 5531. Applications in Audiology. 1 Credit Hour.**

Practical labwork with audiometric equipment, test procedures, administration interpretation, and principles of case management and report writing.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

CSCD 4301|Minimum Grade of C|May not be taken concurrently.

**CSCD 5532. Foundations and Management in Hearing Disorders. 3 Credit Hours.**

This course reviews basic communication sciences and their role in the development of (re)habilitative strategies for use with both adults and children with hearing impairment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

CSCD 4301|Minimum Grade of C|May not be taken concurrently.

**CSCD 5533. Principles of Audiology. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 5534. American Sign Language I. 3 Credit Hours.**

This introductory course provides the necessary skills for basic communication in American Sign Language (ASL). The relationship between manual and oral systems and the implications of deafness on communication are considered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 5546. Research Methods in Communication Sciences and Disorders. 3 Credit Hours.**

Science and clinical practice require the ability to review, analyze, understand, evaluate, and synthesize information from the scientific literature. The purpose of this course is to introduce you to the scientific process and research methods used in speech, language, and hearing sciences. The major goal of this course is to prepare you to be a critical consumer of the research literature and become familiar with evidence-based practice in communication sciences and disorders. The course will focus on the types of research, research designs, and research methods that are commonly used to investigate normal and disordered human communication.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 5634. American Sign Language II. 3 Credit Hours.**

This course continues the basic introduction to American Sign Language (ASL) through exploration of the language used by Deaf people in America, including the syntax, grammar, and vocabulary necessary in ASL. In addition various aspects of Deaf culture will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CSCD 5534.

**CSCD 5729. Language and Deafness. 3 Credit Hours.**

This introduction to deaf studies explores the linguistic structure of American Sign Language, how modality of production-perception shapes language organization (comparisons of signed and spoken languages), deaf culture, deafness and minority cultures, deafness and child development, issues and options in deaf education, deafness in old age.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 5730. Topics in Speech, Language and Hearing. 1 to 3 Credit Hour.**

Special topics in the area of Speech Language Pathology which change from semester to semester are presented. Topics and instructors for a specific semester are announced by the department and posted on the CSCD Department's listserv and web site.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 8147. Basic Practicum in Audiology. 1 Credit Hour.**

Basic practicum in audiology at Temple University Speech and Language Center or one of the field placements with emphasis on basic audiologic testing and interpretation.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8187. Basic Practicum in Diagnostic Processes. 1 to 3 Credit Hour.**

This course introduces assessment of speech-language disorder, emphasizing assessment tools, procedures, rationales, and interpretation.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:**

CSCD 4396|Minimum Grade of C|May not be taken concurrently.

**CSCD 8287. Basic Practicum in Therapy Processes. 1 to 3 Credit Hour.**

This is an introduction to remediation of speech-language disorders, emphasizing therapy methodologies and techniques, procedures, and rationales based on evidence-based practice, and analysis and interpretation of therapy outcomes.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:**

CSCD 4396|Minimum Grade of C|May not be taken concurrently.

**CSCD 8601. Advanced Syntax. 3 Credit Hours.**

This course studies recent advances in syntactic theory, focusing on the tension between universal grammar and the properties of particular languages.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8721. Foundations and Management in Augmentative and Alternative Communication. 1 Credit Hour.**

This course provides information on the identification of individuals who would benefit from Augmentative and Alternative Communication, on assessment of functional communication needs across environments, and on current regulations and documentation to obtain funding for a speech-generating device.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8722. Foundations and Management in Dysphagia. 3 Credit Hours.**

An overview of swallowing processes and disorders specific to the adult and pediatric populations. Assessment and treatment will be discussed.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8723. Seminar in Speech Language Hearing. 1 to 3 Credit Hour.**

This course provides students with in-depth and advanced information and experiences in a variety of topics in Speech, Language, Hearing. Students will review the foundation of anatomy, physiology or function of speech, language or hearing, its etiologies, and have hands on practice with professions in the field. Topics change from semester to semester and are presented in an intensive seminar format over a weekend (Friday half day and Saturday all day).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 8725. Disorders of Articulation and Phonology: Special Populations. 2 Credit Hours.**

This course presents information and experiences to prepare the speech and language specialist to assess, diagnose and treat persons with articulation disorders associated with cleft palate, apraxia, dysarthria and oral myofunctional disorders.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8726. Management of Child Language Disorders. 3 Credit Hours.**

This course presents information and specific skills to prepare the speech and language specialist to function in the educational setting in a variety of roles.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CSCD 5521.



**CSCD 8727. Written Language Development and Disorders. 2 Credit Hours.**

This course focuses on the developmental processes of written language acquisition and written language disorders (dyslexia). Special attention to phonological awareness and the cognitive processes underlying this awareness.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (CSCD 5521, CSCD 5522, and CSCD 8726)

**CSCD 8728. Voice Disorders: Spec Pop. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8729. Neurocognitive Language Disorders. 3 Credit Hours.**

This course will provide a broad introduction to neurocognitive deficits of language in dementia, traumatic brain injury, and right hemisphere damage. We will review neural substrates of human memory and executive functioning and examine how brain damage compromises language and cognition. We will examine assessments of language and memory and cover contemporary theories of neuropsychological rehabilitation.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8738. Proj in Spch Lang Hear. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8824. Assessment and Treatment of Diverse Populations. 2 Credit Hours.**

This course offers concentrated study of language development and disorders in culturally and linguistically diverse populations. Less biased assessment and intervention approaches are discussed.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CSCD 8830. Seminar In CSD. 1 Credit Hour.**

This course focuses on preparing students to work with children from birth through six years in an interdisciplinary environment.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Class Restrictions:** May not be enrolled in one of the following Classes: Graduate 0 to 17 Credits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 9087. Practicum in Hearing. 1 Credit Hour.**

This basic-level practicum exposes students to the problems and therapeutic measures experienced by and available for hearing impaired individuals from childhood through adulthood in various habilitative/rehabilitative settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 9187. Advanced Practicum in Voice. 1 Credit Hour.**

This advanced-level practicum at a field affiliation or at Temple University Speech and Hearing Center (stuttering and voice disorders) focuses on in-depth diagnosis and treatment of a specific disordered population, e.g., L.D., M.R., post-CVA, stuttering, voice, and hearing impairment.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C in CSCD 5528.

**CSCD 9287. Advanced Practicum in Fluency. 1 Credit Hour.**

This advanced-level practicum offers an in-depth focus on assessing and treating persons who stutter.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C in CSCD 5525.

**CSCD 9387. Advanced Field Practicum in Speech Language Pathology - Child. 3 Credit Hours.**

This advanced-level practicum at a field affiliation focuses on in-depth diagnosis and treatment of communication and/or swallowing disorders in a specific disordered child population, i.e., SLL, L.D., M.R., stuttering, voice, hearing impairment, etc. On-site for three days or more.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C in CSCD 8726.

**CSCD 9388. Capstone Field Practicum in Speech Language Pathology - Pediatric. 3 Credit Hours.**

This capstone-level practicum at a field affiliated site focuses on in-depth diagnosis and treatment of communication and/or swallowing disorders in a specific disordered pediatric population, i.e., LD, MR, post CVA, stuttering, voice, hearing impairment, etc. Students can plan to be on-site for at least three days per week.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (CSCD 9387 or CSCD 9487)

**CSCD 9487. Advanced Field Practicum in Speech Language Pathology - Adult. 3 Credit Hours.**

Advanced level practicum at a field affiliation with focus on in-depth diagnoses and treatment of communication and/or swallowing disorders in a specific disordered adult population, e.g., L.D., M.R., post-CVA, stuttering, voice, and hearing impairment. The practicum takes place on-site for three days or more.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C in CSCD 5527 and CSCD 8729.

**CSCD 9488. Capstone Field Practicum in Speech Language Pathology - Adult. 3 Credit Hours.**

This capstone-level practicum at a field affiliated site focuses on in-depth diagnosis and treatment of communication and/or swallowing disorders in a specific disordered adult population, i.e., LD, MR, post CVA, stuttering, voice, hearing impairment, etc. Students can expect to be on site for at least three days/week.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (CSCD 9387 or CSCD 9487)

**CSCD 9582. Independent Study - Communication Sciences. 1 to 6 Credit Hour.**

Qualified students are permitted to conduct investigations and/or in-depth study under supervision of department faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 9587. Advanced Practicum in Aphasia. 2 Credit Hours.**

This advanced-level practicum focuses on in-depth assessment and treatment of persons with aphasia and/or cognitive-linguistic deficits.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Spch Lang Hearing Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** CSCD 5527.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C in CSCD 4396.

**CSCD 9980. Dissertation Seminar. 1 to 6 Credit Hour.**

Current topics in speech-language-hearing research are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course guides study for exams preliminary to a dissertation. Prior to enrollment, students must have completed all required coursework for the Ph.D. and obtain the approval of the Ph.D. Program Director. Students must be enrolled to take the required preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 9996. Thesis Seminar. 1 to 6 Credit Hour.**

The preparation of a master's thesis is the goal of this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CSCD 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Development of a dissertation proposal is undertaken. Registration is required each semester after preliminary examination while a student is researching the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in CSCD 9994.

**CSCD 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is limited to Ph.D. candidates who have completed and defended a dissertation proposal that is filed with the Graduate School by the last day to add a course in the semester. Continuous registration in 9999 fall and spring is required until the dissertation is successfully defended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in CSCD 9998.

## Community Arts (CART)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CART 8004. Creative Engagement. 3 Credit Hours.**

This graduate course focuses on engagement as a creative tool for artmaking, focusing on strategies of collaboration, ethics, project design and implementation, that can serve as a blueprint for one's own creative practice. Students develop skills of negotiation, project management and leadership, and identify strategies of engagement with diverse audiences, adapting these to their personal creative methodology. A topics course, students will develop proposals and projects that will serve as case studies in class, and presented to guest speakers. Invited speakers will include artists, community members, and non-arts professionals whose lives and practices straddle diverse walks of life.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CART 8011. Interdisciplinary Seminar in Community Arts. 3 Credit Hours.**

An introduction to the field of Community Arts, focusing on history and theory, and bringing students into contact with established community arts projects in Philadelphia through site visits and guest lectures. Issues of aesthetics, race and social class are an implicit part of community-based arts practices and are a focal point of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CART 8087. Research and Project Planning Seminar in Community Arts. 3 Credit Hours.**

Working with faculty artists in a particular community, students engage in community data collection using methodologies of personal interviews, observation, and background cultural research with a focus on relationship building. Research findings are integrated to address emerging themes through conceptual design of an art project in a research paper outlining key community themes/issues and proposed art projects. Students will document community knowledge and oral histories and share stories with members of community. Stories will be incorporated into artworks that reflect community traditions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (ARTE 8011 or CART 8011)

**CART 8187. Field Work in Community Arts. 3 Credit Hours.**

Students work with artists in partnership with local community arts programs, organizations, and families, collaborating in the creation of a community arts production. In the weekly seminar, students reflect on their practice, receive supervision and conduct team research to develop their contributions to community arts projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (ARTE 8011 or CART 8011) and (ARTE 8087 or CART 8087)

**CART 8287. Evaluation and Documentation Seminar in Community Arts. 3 Credit Hours.**

In this course students will learn and apply methods for evaluation and ongoing work in the phase of Community Arts projects which follows public exhibition/performance, including assessment of artistic process, product, and community impact; approaches to continuing community involvement, and transitioning of project ownership to the community. The course offers students a variety of media for documenting and assisting community members to document Community Arts projects that may take the form of scholarly articles, video and audio documentary, community feedback and personal essays/journals that contribute knowledge to the field of Community Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (ARTE 8011 or CART 8011), (ARTE 8087 or CART 8087), and (ARTE 8187 or CART 8187)

## Community Health and Aging (PCHA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PCHA P261. Law and Podiatric Medicine. 1.8 Credit Hour.**

This course involves the study of basic legal concepts as they affect the podiatrist, including governmental and statutory control of the profession, contracts, torts, crimes, and the relationship of professional ethics and the law. Students will gain an understanding of the basic legal concepts as they affect the podiatrist and will demonstrate this objective through a written examination.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PCHA P360. Community Health. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PCHA P361. Law & Podiatric Medicine. 1.8 Credit Hour.**

This course involves the study of basic legal concepts as they affect the podiatrist, including governmental and statutory control of the profession, contracts, torts, crimes, and the relationship of professional ethics and law. Students will gain an understanding of the basic legal concepts as they affect the podiatrist and will demonstrate this objective through a written examination.

**Repeatability:** This course may not be repeated for additional credits.

**PCHA P362. Professional Administration and Development. 2 Credit Hours.**

Professional Administration and Development is the study of the art and science of the many facets of podiatric medical practice. The course addresses the practical application of previously learned didactic information so as to enable the student to make intelligent decisions as to practice type, location, finances, third party interrelationship, staffing and the myriad of factors involved in growing a medical practice. Topics will include motivational introspection, practical guidance, and current crucial issues affecting the business of medicine. Emphasis will also be placed on record keeping, governmental financial obligations, computerization, and other topics based on student needs.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PCHA P382. Law and Community Health. 1 Credit Hour.**

This course provides a comprehensive and in-depth review of issues pertaining to Public Health, Epidemiology, and Biostatistics. Topics of discussion will include but are not limited to the varying health care models utilized in the United States and abroad, quality assurance, risk management, various models of health care, basic statistics, research development, epidemics, pandemics and law in medicine. Note: Successful completion of the second year is required to take the course.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

## Computer and Information Science (CIS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CIS 5001. Comp-Based Appl Prog. 3 Credit Hours.**

The course emphasizes component-based application programming using the Microsoft Visual Studio Integrated Development Environment (IDE). Students will learn (and practice using) the VB .NET programming language, object-oriented software design techniques, and the principles of good user interface design. Topics include building quality software, including user interfaces to databases (using ADO.NET), sequential files, and graphics tools. Object-oriented concepts such as inheritance, polymorphism, static and dynamic binding, and interface (abstract class) components will be covered. The use of ASP.NET for client-server systems development is also elaborated. Note: Graduate credit will not apply for CIS MS/PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5002. Database Design & Programming. 3 Credit Hours.**

This course provides an in-depth understanding of the modeling, design and implementation of database systems. Students develop an appreciation of the role of data, files and databases in information systems, gain an understanding of database development activities as part of the System Development Life Cycle (SDLC), and become familiar with data modeling concepts. Students are expected to be able to create databases and pose complex SQL queries of relational databases using Oracle and Microsoft Access. Topics include the relational model, E-R and Class Diagrams, normalization, advanced SQL, Oracle Enterprise system transaction processing, concurrency control, and recovery. Also covered are aspects of database administration, data integrity, security and authorization, stored procedures and triggers, the embedding of SQL in procedural languages and scripting languages, multi-tiered architectures, middleware, ODBC web-based databases, and web application integration. Students work in teams to implement large scale information system using a DBMS. CASE tools are used for data modeling. Note: Graduate credit will not apply for CIS MS/PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5003. Networking & Operating Systems. 3 Credit Hours.**

This course covers the essentials of operating systems and computer networks. Topics include: the processor, data and program representation, computer memory systems, software system support for I/O including support for networking, and a thorough introduction to the TCP/IP protocol suite. Note: Graduate credit will not apply for CIS MS/PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5011. Programming and Data Structure. 3 Credit Hours.**

Preparatory course for CIS graduate students who have an insufficient background in data structures, and need a stronger foundation before taking the required core course, Programming Techniques 5511 (formerly 8511). Note: Graduate credit will not apply for CIS MS/PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5012. System Software and Operating Systems. 3 Credit Hours.**

Preparatory course for CIS graduate students who have an insufficient background in operating systems, and need a stronger foundation before taking the required core course, Operating Systems 5512. Note: Graduate credit will not apply for CIS MS/PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5013. Discrete Structure of Computer Science. 3 Credit Hours.**

Preparatory course for CIS graduate students who have an insufficient background in discrete structures, and need a stronger foundation before taking the required core course, Automata & Formal Languages 5513. Note: Graduate credit will not apply for CIS MS/PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5015. Scripting for Sciences and Business. 3 Credit Hours.**

Focus on three scripting languages and multiple operating environments for scientific computing and for business, practical scientific computing projects, and integration of numerical computation with experimental results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5016. Data Structures and Objects. 3 Credit Hours.**

Data structures are the fundamental building blocks for organizing data. This course teaches how to build data structures and what can be done with them, as well as fundamental object oriented concepts. Topics include object oriented programming, lists, stacks, queues, trees, heaps, hash tables, graphs, sorting, and recursion. Note: Students may not receive credit for both CIS 2168 and CIS 5016. Graduate credit will not apply for CS/CDS MS and CIS PHD programs without approval from CIS department.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5017. Operating Systems and Architecture. 3 Credit Hours.**

This course provides an introduction to computer architecture and operating systems concepts to students without a background in computer systems. The objectives are to introduce the basic concepts for understanding and evaluating operating systems and the most important computer architecture issues impacting operating system design, implementation and selection. Note: Students may not receive credit for both CIS 2229 and CIS 5017. Graduate credit will not apply for CS/CDS MS and CIS PHD programs without approval from CIS department.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5105. IT Process Management. 3 Credit Hours.**

An introduction to essential techniques for successfully creating, organizing and managing IT projects. The course provides the foundation for more advanced studies in process management and software engineering. Enterprise-wide requirements, long-range planning and managing all aspects of the development process will be emphasized. The course will stress the use of appropriate software tools and process modeling throughout the development lifecycle. Quality assurance techniques are introduced at the outset to guide IT processes and decision making. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5106. System Development Processes. 3 Credit Hours.**

Methods and tools for the technical development of IT systems are presented and used in case projects. The course follows the normal development lifecycle, starting with the recognition and justification of the need for either a new system or an upgrade to an existing system. It then proceeds through analysis, specification, design, implementation, testing (quality assurance), client training and turnover, and maintenance. The importance of each development stage will be taught within the framework of systems reliability, effectiveness, security, scalability, and development cost. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5107. Computer Systems Security and Privacy. 3 Credit Hours.**

Computer systems security and information privacy has become a critical area of computer science development and research. This course involves an analysis of the technical difficulties of producing secure computer information systems that provide guaranteed controlled sharing and privacy. Emphasis is on software modeling and design to better ensure the protection of resources (including data and programs) from accidental or malicious modification, destruction, or disclosure. Current systems and methods will be examined and critiqued. The possible certification of such systems will also be investigated. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5108. Emerging Technologies. 3 Credit Hours.**

The purpose of this course is to provide students with an understanding of maturing and emerging technologies and their likely impact on the networked information paradigm and enterprise management. Both hardware and software technologies will be covered. Students will be introduced to advanced software tools that demonstrate how agency enterprises make use of vast information flows and interconnectivity. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5208. Knowledge Management. 3 Credit Hours.**

Principles of knowledge management (KM) and their use in locating, evaluating, disseminating, and using information and knowledge. Application of these principles and techniques. Knowledge management incorporates data acquisition, information integrity, and management of knowledge and is crucial to everyone working in any field where information is stored, processed, and used. It places a premium on an IT-intensive organization to invest, cultivate, and fully utilize the intellect and knowledge of all staff. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5210. Seminar in Information Science and Technology. 3 Credit Hours.**

An intermediate level graduate special topics course in current and emerging developments in information systems and technology. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs. This course is repeatable for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 5221. Introduction to Mobile Application Development. 3 Credit Hours.**

This course will introduce students to concepts in application development for mobile devices. Students will learn how to address challenges in hardware and user interfaces by incorporating software design and user-interaction design principles. Additionally, students will learn about mobile-centric concerns such as software and data distribution models, leveraging third party software, and managing data locally and remotely. Students should have prior experience in building applications that involve Object Oriented Development principles, such as inheritance, interfaces, encapsulation, and polymorphism. Additionally it would be good to have had a major role in working on a non-trivial software development project, such as a transactional system with CRUD (create, read, update, delete) operations, or a systems level program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5274. Software Quality Assurance and Testing. 3 Credit Hours.**

Software quality assurance consists of a means of monitoring the software engineering processes and methods used to ensure quality. The overarching goal of this class is to develop practical skills to help achieve software quality. The main objectives of this class are to understand the quality assurance process and to learn how to use testing techniques to achieve software quality. Students will learn 1) fundamental concepts in software testing, including software testing objectives, process, criteria, strategies, and methods; 2) various software testing techniques, including automated testing techniques, to support various levels of software testing: unit, integration, regression, and systems testing; 3) techniques and skills on how to use modern software testing tools to support software testing projects; 4) how to plan a test project, design test cases and data, conduct testing operations, manage software problems and defects, and generate a testing report; and 5) basic techniques in usability, performance, and security testing. Note: Students may not receive credit for both CIS 3374 and CIS 5274. Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5275. Software Project Management. 3 Credit Hours.**

Project management knowledge and skills are critical to the success of every Information Technology (IT) project. This course will use IT project case studies to examine basic components of time, scope and resources within the project management processes defined by the Project Management Institute. At the completion of this course, students will be able to create project plans for software development projects as well as for IT infrastructure projects. They will know how to manage a team, how to write effective status reports, and make compelling presentations to management. This course exposes students to practical examples and tools that are used in typical IT projects in industry today. Note: Students may not receive credit for both CIS 3775 and CIS 5275. Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5301. Advanced Database Management Systems. 3 Credit Hours.**

This course provides an in-depth understanding of the modeling, design and implementation of database systems. Topics include the relational model, E-R Diagramming and Class Diagrams, normalization, advanced SQL, Oracle Enterprise system transaction processing, concurrency control, and recovery. Also covered are aspects of database administration, security and authorization, stored procedures and triggers, the embedding of SQL in procedural languages and scripting languages, multi-tiered architectures, middleware, ODBC web-based databases, and web application integration. Students work in teams to implement large scale information system using a DBMS. CASE tools are used for data modeling. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**CIS 5303. Usability Engineering. 3 Credit Hours.**

This course focuses on the principles of usability engineering to design effective interfaces. In parallel with functional specification development, usability engineering identifies the usability specifications of the system, which includes information and interface design. In some modern day information systems, usability can be paramount and require as much or more effort and programming as functional requirements, i.e., information systems may provide relevant functionality, but if the system is not easy to learn and use, it may fail. Using theories and principles from software engineering and psychology, students learn to analyze usability requirements to improve user interface development. Note: Students may not receive credit for both CIS 3603 and CIS 5303. Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5304. Network Technologies. 3 Credit Hours.**

Focuses on the design, construction and use of modern networks and inter-networks, including Internet, intranet, firewalls, VPN, e-mail, and wireless technologies. Prepares students to successfully create and operate modern secure networks. Key concepts and technologies include LAN design and construction, Internet architecture, internetworking (with an emphasis on the Internet), WAN connectivity, firewalls, Application Layer protocols, virtual private networks, wireless and network operation in real-world environments. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5306. Software Engineering. 3 Credit Hours.**

A project-based course focusing on current methodologies employed in software design and development. The core material covers the key components of software engineering, including requirements analysis, specification development, detailed design, program development, quality control (verification and validation), configuration management, testing, and post-development maintenance. Emerging software development techniques - security engineering, service-oriented architecture (SOA), and aspect-oriented development are also introduced. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5405. Introduction to Digital Forensics. 3 Credit Hours.**

This course is a broad introduction to the field of Digital Forensics. It covers various fundamental topics necessary for digital forensics investigation. The course begins with foundations of electronic evidence including cyber-crime laws, the 4th amendment, compliance and requirements, collection and handling, analysis, and reporting. The course also covers fundamentals of file systems with specific details pertaining to Microsoft FAT file systems. Students will learn two important forensics techniques - file recovery and file carving - among other things. Finally, forensics artifacts relevant to Windows Systems and Networks are discussed with relevant lab activities and students are also introduced to Antiforensics. Hands-on lab activities familiarize students with several relevant investigation techniques and the use of open source forensics tools. Students who have completed an equivalent course at Temple or another institution will take an elective as recommended by the program advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CIS 5017.

**CIS 5410. Advanced Seminar in Information Science and Technology. 3 Credit Hours.**

An advanced level graduate special topics course in current and emerging developments in the field of information systems and technology. Note: Graduate credit will not apply for CS/CDS MS and CIS PHD programs. This course is repeatable for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 5413. Introduction to Privacy and Security for Internet-of-Things. 3 Credit Hours.**

The Internet-of-Things (IoT) is an emerging field that embeds computing and communication capabilities into everyday objects to make them "smarter." From smart cities to smart power grids, from autonomous vehicles to AI-powered decision systems, this new Internet-of Things (IoT) world brings with it many new security and privacy challenges. The objective of this course is to introduce students to the new cyber-security and privacy issues in these emerging systems, as well as the latest research on defending against these threats. Some of the topics that will be covered include security of wireless protocols such as Bluetooth, Zigbee, etc.; security and privacy issues in various application domains such as smart homes, public safety, healthcare, and wearable systems; and the security of backend cloud computing used in IoT systems. Graduate credit will not apply for CS/CDS MS and CIS PHD programs. Note: Students must meet the course prerequisites or have the consent of the PSM director to enroll in this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in CIS 5405.

**CIS 5415. Ethical Hacking and Intrusion Forensics. 3 Credit Hours.**

This class will introduce students to the field of hacking with the primary focus being the difference between White-hat Hacking (a.k.a Ethical Hacking) and Black-hat Hacking. The course will enable students to understand how to use hacking techniques to perform a hack within legal confines. The course will focus on both technical and social aspects of security, ranging from cryptography and biometrics to risk mitigation and disaster recovery aspects of organizational security. Of specific focus will be the following broad concepts - Reconnaissance, Scanning, enumeration, and Sniffing and Evasion. Based on the ethical concepts built during the first half of the semester, students will learn the process involved with forensics investigations of intrusion attack.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CIS 5017 and CIS 5107.

**CIS 5418. Blockchain Application Development. 3 Credit Hours.**

Blockchain technology is a fast-growing sector in the tech industry. There is a shortage of blockchain developers. Learning blockchain technology will expand students' choices in starting their IT career and increase their employability. This course covers both the technical knowledge and hands-on skill relevant to this technology but emphasizes more on hands-on skill. It includes technical fundamentals, such as cryptography, blockchain, distributed consensus, peer-to-peer network, smart contract, and decentralized application. Students are introduced to some advanced topics, such as scalability, security, privacy, and interoperability. Blockchain applications in different sectors are presented. In addition, the course covers hands-on coding using Solidity programming language and decentralized application development IDE tools. The course focuses on public blockchains and uses the two largest blockchains by market cap, Bitcoin and Ethereum, as examples of such blockchains.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (CIS 5015 or CIS 5016)

**CIS 5425. Audit and Compliance for Security and Digital Forensics. 3 Credit Hours.**

Information Systems' audit and assurance professionals are faced with different requirements and different types of audit and assurance. This course will provide students with a basic understanding of enterprise IT security and the need for audit and compliance. Students will learn about IT Security Terminology, Governance, and the Security audit practice that has matured into given sets of frameworks, methodologies, approaches, and models with certain sets of underlying assumptions such as COBIT, SOX, DoD, FIPS 100/200, FISMA, NIST, HSPD, OMB. Students will be exposed to various governance standards and federal compliance requirements - ISO27000, SAS, GAAP. Students will also learn some fundamentals such as differences between policy, process and procedure and the purpose of policy, process and procedure. Students who have completed an equivalent course at Temple or another institution will take an elective as recommended by the program advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5511. Programming Techniques. 3 Credit Hours.**

*Prerequisites: CIS 2168 and CIS 3223.*

A more formalized view of data structures. Stacks, trees, tables, lists, multilinked structures, strings and files are considered. These are viewed in terms of their general usefulness in the construction of algorithms and in their efficient implementation. Both theoretical results and programming techniques will be stressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5512. Operating Systems. 3 Credit Hours.**

*Prerequisites:* CIS 3207 and CIS 3223.

Basic principles of operating systems; multi-tasking systems; control and coordination of tasks; deadlocks; synchronization, mutual exclusion, sharing; memory management, virtual memories, segmentation, paging; protection; file systems; resource management; evaluation and prediction of performance; design and implementation of operating systems in high-level languages.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5513. Automata and Formal Languages. 3 Credit Hours.**

*Prerequisites:* CIS 2166 and CIS 3242.

Types of grammars. Finite automata and regular languages. Kleene's Theorem. Closure properties and decidable problems of regular languages. Derivation trees. Normal forms of context-free grammar. The self-embedding properties, closure properties and decidable problems of context-free languages. Methods of syntax analysis for context-free languages. Context-sensitive languages and linear bounded automata. Turing machines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5515. Design and Analysis of Algorithms. 3 Credit Hours.**

The course objective is to provide students with an understanding of the principles and techniques used in the design and analysis of efficient algorithms. The main topics cover Greedy Algorithms, Divide and Conquer, Dynamic Programming, Network Flow, and Approximation Algorithms. Theoretical results related to NP-completeness will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CIS 5511.

**CIS 5516. Principles of Data Management. 3 Credit Hours.**

*Prerequisites:* CIS 5511 (or 8511).

This course covers fundamental concepts in constructing database management systems, including relational query languages, such as SQL and relational algebra, file organizations, storage management, system architectures, query processing, query optimization, transaction management, recovery, and concurrency control. Additional topics may include distributed databases, NoSQL databases and data integration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5517. Data-Intensive and Cloud Computing. 3 Credit Hours.**

*Prerequisites:* CIS 2168 and (CIS 2166 or MATH 2101 or ENGR 2011 or MATH 3045).

This course will expose students to recently emerged and fast moving technology of big data and cloud computing. It will cover a spectrum of topics from core techniques in data management and analysis to highly-scalable data processing using parallel database systems. Students will be introduced to big data ecosystems such as Hadoop, Spark, Storm and MapReduce; cloud technologies such as Amazon EC2, Microsoft Azure and Google Cloud; data management tailored to cloud and big data such as No SQL, Google Big Table/Apache HBase, and introductory applications to Big Data and cloud environment. Students will work directly with a selected set of these platforms, compare and contrast their relative strengths and weaknesses, and characterize the problems they are designed to solve. Note: Students may not receive credit for both CIS 5517 and CIS 4517.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5523. Knowledge Discovery and Data Mining. 3 Credit Hours.**

*Prerequisites:* MATH 2043 and (CIS 2166 or MATH 2101 or ENGR 2011) and (MATH 3031 or ECE 3522 or STAT 2103 or BIOL 3312) and (CIS 1051 or CIS 1057 or CIS 1068).

Basic concepts and techniques for the automated extraction of interesting patterns in large databases. Topics covered include: association-rule mining, sequence mining, web and text mining, data warehousing, information filtering, classification and clustering analysis, Bayesian and neural networks, classification and regression trees, hypotheses evaluation, feature extraction, dimensionality reduction, singular value decomposition, data compression and reconstruction, visualization of large data sets, fractals in databases, and indexing methods that support efficient data mining and queries by content. Special emphasis is given in multimedia, business, scientific, and medical databases. Note: Students may not receive credit for both CIS 5523 and CIS 4523.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5524. Analysis and Modeling of Social and Information Networks. 3 Credit Hours.**

*Prerequisites:* MATH 2043 and (CIS 2166 or MATH 2101 or ENGR 2011) and (MATH 3031 or ECE 3522 or STAT 2103 or BIOL 3312) and (CIS 1051 or CIS 1057 or CIS 1068).

This course will include methods for analyzing and modeling the following aspects of social networks: the small-world network models, centralized and decentralized social network search algorithms, power-laws and preferential attachment, diffusion and information propagation in social networks, influence maximization in social networks, community detection in social networks, models of network cascades, models of evolving social networks, links and attributes prediction. Note: Students may not receive credit for both CIS 5524 and CIS 4524.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5525. Neural Computation. 3 Credit Hours.**

*Prerequisites:* STAT 8003/8103 and undergraduate-level understanding of probability, statistics, and linear algebra.

Neural networks provide powerful techniques to model and control nonlinear and complex systems. The course is designed to provide an introduction to this interdisciplinary topic. The course is structured such that students from computer science, engineering, physics, mathematics, statistics, cognitive sciences, and other disciplines learn the main principles of this area as well as have an opportunity to explore promising research topics through hands-on experience with neural network simulators applied to classification and prediction problems ranging from biomedical sciences to finance and business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5526. Machine Learning. 3 Credit Hours.**

*Prerequisites:* MATH 2043 and (CIS 2166 or MATH 2101 or ENGR 2011) and (MATH 3031 or ECE 3522 or STAT 2103 or BIOL 3312) and (CIS 1051 or CIS 1057 or CIS 1068).

The goal of the field of machine learning is to build computer systems that learn from experience and are able to adapt to their environments. This introductory machine learning course will present modern machine learning algorithms for supervised and unsupervised learning. It will provide the basic intuition behind the algorithms as well as a more formal understanding of how and why they work. Students will learn how to apply machine learning algorithms on a range of real-life problems and how to evaluate their performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5527. Data Warehousing, Filtering and Mining. 3 Credit Hours.**

*Prerequisites:* CIS 5511 (or CIS 8511) and an undergraduate course in databases.

The course is devoted to information system environments enabling efficient indexing and advanced analyses of current and historical data for strategic use in decision making. Data management will be discussed in the content of data warehouses/data marts; Internet databases; Geographic Information Systems, mobile databases, temporal and sequence databases. Constructs aimed at an efficient online analytic processing (OLAP) and those developed for nontrivial exploratory analysis of current and historical data will be discussed in detail. The theory will be complemented by hands-on applied studies of problems in such fields as financial engineering, e-commerce, geosciences, and bioinformatics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5528. Predictive Modeling in Biomedicine. 3 Credit Hours.**

Biomedical data science has emerged as analytics frontiers in reaping the benefits of statistical and machine learning toward advanced modeling of massive biological and medical data. This course introduces classical and state-of-the-art methodology development in machine learning applied to bioinformatics and biomedical data science. Topics include classical and emerging algorithms in predictive modeling that are particularly useful in biomedical data analytics. By the end of the class, students will have gained the knowledge of diverse statistical and machine learning methods and evaluate relevant scientific publications, as well as the capability of developing open-source programs to analyze and interpret biological and biomedical data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5535. Probabilistic Graph Models. 3 Credit Hours.**

*Prerequisites: CIS 2033 and CIS 3223.*

Probabilistic graphical models are very important machine learning tools for knowledge representation and reasoning under uncertainty. They have been widely used in machine learning and related fields, such as computer vision, natural language processing, data mining, bioinformatics and even computer network research. This course aims to make a comprehensive introduction over the most important theories, algorithms, and applications of probabilistic graphical models, and facilitate the advanced research within the computer & information sciences department and related disciplines outside.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5538. Text Mining and Language Processing. 3 Credit Hours.**

*Prerequisites: CIS 2033.*

This course will cover a broad overview of problems and techniques in text mining and natural language processing. It will also provide in-depth coverage of the latest natural language processing research in selected topics. The in-depth part of the course will focus on the latest research in unsupervised information extraction. This part of the course will cover such techniques as pointwise mutual information, pattern-matching, bootstrapping, Hidden Markov Models, Conditional Random Fields, and language modeling techniques, among others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5543. Computer Vision. 3 Credit Hours.**

*Prerequisites: CIS 2033 and CIS 3219 and CIS 3223.*

The objective of the course is to introduce the theory and application of computer vision. The theoretic part introduces the analysis of visual patterns and the generative models behind them. The application part uses real world tasks to help students to learn practical computer vision technologies. The course covers the following topics: image formation (camera model, color space, illumination model, etc.), low level vision processing (edge detection, intensity based segmentation, etc.), popular research tools in computer vision, visual matching and registration, visual recognition, image and category classification, scene understanding, object detection, visual tracking, activity and action analysis, and selected advanced topics. In addition to course lectures, the course uses homework assignments, in-class discussions and course projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5590. Topics in Computer Science. 3 Credit Hours.**

*Prerequisites: Special authorization required.*

Current topics and issues in Computer Sciences are covered. This course is repeatable for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 5603. Artificial Intelligence. 3 Credit Hours.**

Artificial intelligence encompasses the algorithms and representations used to design computers and agents for problem-solving and learning. This course covers the classic and modern methods that support technology such as game-playing agents, autonomous vehicles, and virtual assistants. The topics covered include: search, reasoning, knowledge representation, and learning. The course is intended to prepare graduate students for further study in machine learning, data mining, robotics, and computer vision.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5617. Computer Networking and Communication. 3 Credit Hours.**

*Prerequisites:* CIS 5511 (or 8511) and CIS 5512 (or 8512).

Introduction to the design and analysis of computer networks and communications systems, including the Physical, Data Link, Network, Transport and Application layers. The Internet (TCP/IP) model will be emphasized and compared and contrasted with other current technologies. Major themes include the distinction between service and protocol, performance metrics, analysis techniques, and fundamental performance tradeoffs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5618. Energy Management in Data Centers and Beyond. 3 Credit Hours.**

Students are expected to have a background in data structures and algorithms as well as computer architecture and operating systems. Comprehensive coverage of energy management in data centers: essential concepts in data center architecture, including the computing core, data center network, and storage systems; energy management in computing elements, caches, "in-the-box" interconnects, primary memory, storage systems, and data center network; data center level issues including power, thermal, and cooling management at data center level and interaction of data centers with smart grid. Other issues covered include design of energy efficient software, virtualization and energy management of VMs, energy issues in cloud computing, and modeling of energy-performance interplay.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5635. Security in Cyber-Physical Systems. 3 Credit Hours.**

*Prerequisites:* CIS 3207 and CIS 3223.

Cyber-Physical Systems (CPS) augment physical systems with monitoring, communication and control capabilities to enhance their efficiency, flexibility, safety, and resilience. The course will start with an overview of these opportunities and challenges and then gradually explore a few physical systems including their monitoring, communications, control, safety, and security requirements, as well as potential attack vectors and solutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5636. Ad Hoc Networks. 3 Credit Hours.**

*Prerequisites:* CIS 3223, and CIS 4319 or 4329.

A comprehensive approach to fundamentals of ad hoc networks including media access protocols, routing protocols, implementation and communication performance analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5637. Network & Information Security. 3 Credit Hours.**

*Prerequisites:* CIS 3329 or CIS 4319 or CIS 5003.

This course introduces fundamental knowledge of cryptography and its applications to network and information security.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5639. Wireless Network and Communication. 3 Credit Hours.**

*Prerequisites:* CIS 3207 and CIS 3223.

This course introduces the fundamental design and performance issues of wireless networks and communications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5642. Computer Architecture. 3 Credit Hours.***Prerequisites: CIS 2168 and CIS 3207.*

Since 1951, there have been thousands of new computers using a wide range of technologies and having widely varying capabilities. Dramatic changes that have occurred in just over 50 years. After adjusting for inflation, price/performance has improved by almost 100 billion in 55 years, or about 58% per year. Another way to say it is we've seen a factor of 10,000 improvement in cost and a factor of 10,000,000 improvement in performance. This course covers the recent developments in modern computer architectures and the emerging design methods for high performance computing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5643. Emerging Storage Systems and Technologies. 3 Credit Hours.***Prerequisite: CIS 3207.*

Storage systems are of increasing importance because of ever-growing volume, velocity, and heterogeneity of data produced by a wide variety of computer systems. This course will provide a comprehensive coverage of storage and file systems that underlie bigdata systems with respect to both technological and application related challenges.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5644. Distributed Systems. 3 Credit Hours.***Prerequisites: CIS 2166 and CIS 2168 and CIS 5512 (or 8512).*

We consider a distributed computer system that consists of multiple autonomous processors that do not share primary memory but cooperate by sending messages over a communication network. Discussion of special problems related to distributed control such as election and mutual exclusion, routing, data management Byzantine agreement, and deadlock handling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 5701. Introduction to Teaching Computer Science Principles. 3 Credit Hours.**

This course provides students with a foundation in the concepts and computational thinking practices central to the discipline of computer science. The content in this course is organized around ideas that are foundational to the study of computer science: creativity, abstraction, data and information, algorithms, programming, and the global impact of computing. By the end of the course, students will be able to apply creative processes and computational thinking skills to develop a computer program in order to solve a problem. In addition, students will engage in pedagogical content related to equitable and inclusive teaching of computer science principles in secondary education. This course assumes no prior knowledge of computing. It is designed to support K12 teachers who are new to the computer science discipline and want to integrate computational thinking and computer science principles into their classroom teaching activities. This course cannot be taken for credit towards any other graduate programs offered by CIS.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 1021.

**CIS 5702. Teaching Advanced Computer Science Principles. 3 Credit Hours.**

Creating computer programs that solve problems is facilitated by the use of abstractions. Building on the computational thinking concepts and practices learned in the previous course, this course will extend students' knowledge of computational thinking, problem solving, and programming abstractions. Students will extend their knowledge and practice the use of simple algorithms as part of a computer program. In addition, students will extend their knowledge of basic types used to represent data in programming languages, including primitive data types, strings, classes, arrays, and streams. Students will also be introduced to more advanced programming language concepts (e.g., parameter passing techniques) and basic object-oriented programming abstractions (e.g., classes, objects, inheritance, and polymorphism). Searching and sorting algorithms will be covered, with a focus on exposing students to different algorithm design strategies (iterative vs. recursive). Finally, students will apply pedagogical principles related to equitable and inclusive teaching of computer science principles in secondary education to begin developing a portfolio of teaching materials that they can use in their own classrooms. This course cannot be taken for credit towards any other graduate programs offered by CIS.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CIS 5701.

**CIS 5703. Teaching Networked Computing Systems. 3 Credit Hours.**

This course provides an introduction to computer networks with a strong focus on the Internet. Topics introduced include the layered network architecture, types of connectivity, addressing, packet switching, routing, reliable data transmission, and network security. The course will include discussions regarding Internet security, privacy, modern networked applications, and social implications and ethics. It will also build on knowledge of algorithms and data structures, introducing queues, graphs, trees, and related algorithms used in the function of network protocols and the Internet. In addition, students will engage in pedagogical content related to equitable and inclusive teaching of networked computer systems concepts in secondary education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CIS 5702.

**CIS 5704. Teaching the Use of Data, Algorithms, and Creativity for Problem Solving. 3 Credit Hours.**

In this course, students will advance their understanding of computer science principles through the development of a creative computational artifact that can be demonstrated and used for teaching purposes in secondary education classrooms. Through this experience, students will develop knowledge about how to represent and store data as well as how to appropriately select and apply algorithms to solve problems. Students will also explore user interaction and user experience design choices and their impact on populations of users. An essential learning objective is to understand the impact of the choice of data type and algorithm on the quality attributes of programs. Searching and sorting algorithms will be covered, with a focus on exposing students to different algorithm design strategies (iterative vs. recursive). In addition, students will develop, compile, present, and evaluate portfolios of pedagogical content related to equitable and inclusive teaching of computer science in secondary education, with a focus on strategies to increase student engagement and broaden participation of underrepresented groups in computing. This course cannot be taken for credit towards any other graduate programs offered by CIS.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in CIS 5702.

**CIS 9182. Independent Study. 1 to 6 Credit Hour.**

Independent research supervised by a Computer and Information Sciences faculty member. NOTE: Only six credits of independent study can be counted towards any MS degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9190. Seminars in Computer and Information Science. 1 Credit Hour.**

Throughout the semester, various guest lecturers will discuss their area of research. Students are required to attend at least five lectures and submit five short papers on the topics presented. This course counts in the same category as independent study when it comes to program requirements (MS and/or PhD degree). This course is recommended for PhD students who have passed the qualifying exam, to broaden their research interests. This course is recommended for MS students who are interested in CIS research and want to take 10 credits per semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Science & Technology.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9282. Independent Study. 1 to 6 Credit Hour.**

Independent research supervised by a Computer and Information Sciences faculty member. NOTE: Only six credits of independent study can be counted towards any MS degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9590. Seminar in Advanced Topics in Computer Science. 3 Credit Hours.**

*Prerequisites: Permission of instructor.*

Topics to be decided individually.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**CIS 9601. Computer Graphics and Image Processing. 3 Credit Hours.***Prerequisites: CIS 5511 or 8511.*

An analysis of techniques used in computer manipulation of two- and three-dimensional images. Although elements of computer graphics are covered (e.g., two- and three-dimensional transforms), the main focus is on image processing techniques. We will also gain insight into basic techniques in computer vision. Topics covered include image filters, image segmentation, similarity of images, object detection, object recognition, and shape representation and similarity. Nowadays it is an easy task to transfer visual input of a camera to a computer's memory. However, image and video understanding belong still to unsolved problems of computer science. The main objective of the course is to convey basic intuitions behind the unsolved and solved problems and to introduce some of the techniques that provided solutions to some of the problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9602. User Interface Design and Systems Integration. 3 Credit Hours.***Prerequisites: CIS 5511 or 8511.*

This course focuses on the principles of usability engineering to design effective interfaces and as the basis for integrating existing systems to form new systems. The course builds on knowledge of networking, databases, and programming. The course outline is partly based on the recommendations of the ACM Special Interest Group on Computer-Human Interaction for an introductory graduate course on user interface design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9618. Web Applications Development. 3 Credit Hours.***Prerequisites: CIS 5511 (or 8511) and CIS 5512 (or 8512).*

This course takes a technology-based approach to software engineering of networked application systems design and programming. It draws on new Microsoft .NET technology, together with former object-oriented design and programming, for its theoretical, architectural, and system design foundations. The course bridges software engineering principles in their most abstract and conceptual sense, with programming technique in its most concrete and pragmatic sense. It demonstrates how to optimize productivity of the software engineer, integrate the best that open technologies have to offer, and build large-scale systems that operate most efficiently on the internet. The course is divided into three parts: 1) theory that flows from .NET and object-oriented methodologies, including Application System Architectures, Design Methodologies, Quality Assurance, Scalability, and Security; 2) development of a working skill set in two .NET languages: ASP.NET and VB.NET and its major development tool, VS.NET; and 3) design and programming of a small but complete web-deployed application.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9651. Artificial Intelligence, Heuristic Models, and Education. 3 Credit Hours.***Prerequisites: CIS 5603 or 8603.*

Introduction to how artificial intelligence and heuristic models are used to build better computer-based educational systems. Current as well as past models are explored (e.g. PROUST, GUIDON, SOAR, etc.). Key issues to be examined include student models, interfaces, pedagogical expertise, domain expertise, and collaborative learning systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9665. Advanced Topics in Data Base Systems. 3 Credit Hours.***Prerequisites: CIS 5516 or 9616.*

Survey of recent developments in database systems with an emphasis on object-oriented databases (OODB's). Prototype and operational OODB systems will be analyzed. Applications of OODB's to computer-aided software engineering (CASE) environments, integrated application development environments, and geographical information systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9666. Advanced Networks and Client-Server Computing. 3 Credit Hours.**

*Prerequisites:* CIS 5617 or 9617.

Computer networks, network technology, protocols, routing algorithms, reliability and design issues. Data transmission and transmission media, data communications fundamentals, transmission efficiency, wide-area networks, local area networks, wireless networks, TCP/IP and other protocol architectures, client/server computing, network management, and network security.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9668. Design and Development of E-Commerce Systems. 3 Credit Hours.**

*Prerequisites:* CIS 9618.

This course teaches the technical aspects of developing a commercial website, including the business-to-consumer and business-to-business models. This process combines a number of integrated technologies: Web page and style sheet design; dynamic web pages that access data from relational and XML databases; server side transaction processing; client/server and distributed processing; principles of internet security, scalability, and database reliability; and .NET programming. Students develop a site as a course project using custom coding using .NET and Microsoft's web site development system Commerce Server 2000. Other tools to be used are Dreamweaver or FrontPage for web design, VS for .NET program development, and the Microsoft Enterprise Manager for the management of SQL Server databases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9669. Distributed and Parallel Computer Systems. 3 Credit Hours.**

*Prerequisites:* CIS 5617 or 9617.

Intended for students interested in the advances of scalable parallel computing systems. The main goal is to apply distributed and parallel computing theories to practical scalable parallel application development and new parallel programming tool construction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CIS 9991. Master's Research Projects. 1 to 6 Credit Hour.**

Short-term, limited research project or laboratory project in the field. This course is not the capstone project course, nor can it be used for thesis based research. The course is for master's students only, including PSM, MA or MS. This class will not confer full-time program status unless nine credits are taken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is required for students who are preparing for the preliminary or candidacy examination. Students should enroll after coursework is completed or when preparing for the candidacy exam until the time that the preliminary or candidacy examination is completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. All students must complete a minimum of one credit of this course. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9995. Capstone Project. 1 to 6 Credit Hour.**

Capstone project for master's students including students in PSM, MA or MS. This class will provide full-time status. Students in PSM programs need to register for at least one credit of this course to fulfill program requirements. Additional credits may be required for specific programs. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

Course for master's thesis research. Only intended for students in thesis bearing master's programs. A minimum of one credit is required. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9998. Pre-Dissertation Research / Elevation to Candidacy. 1 to 6 Credit Hour.**

This course is intended for students who are performing research prior to candidacy. Students can register for this course after required courses are completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must be registered for this course during the semester that they are to be elevated to candidacy examination. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CIS 9999. Dissertation Research. 1 to 6 Credit Hour.**

The course is for Ph.D. students who have been elevated to candidacy. During the course of their candidacy students must complete a minimum of two credits of dissertation research. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## **Conflict and Communication (CNCM)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CNCM 5000. Conflict and Communication Colloquium. 1 Credit Hour.**

In a one-hour colloquium, on a weekly basis throughout the first year of the masters program, this course introduces students to the academic field of conflict and communication by exploring current problems and opportunities in this field of study through discussions and presentations of current research and through presentations by scholars and practitioners of conflict and communication research and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**CNCM 5101. Conflict and Communication Theory. 3 Credit Hours.**

The course examines the role of communication theories in settings where there is an attempt to manage conflict among individuals or groups. The course is organized around the major theoretical perspectives that have been used to study conflict. These perspectives describe, explain and sometimes predict the route that conflict often takes. These perspectives are drawn from diverse academic disciplines, but each contributes in unique ways to our understanding of conflict processes and each sheds light on the way communication unfolds in difficult conflict situations. Students will enhance their understanding of the nature of theoretical perspectives in general, as well as study specific conflict theories that have been created with each perspective. This focus enables students to understand and draw from current and future theory and research on conflict. The goal is to develop astute practitioners who know the research and theory on conflict and can use it and apply it in professional and personal settings. A significant emphasis is placed in the course on communication processes in conflict. This emphasis on conflict interaction allows for many practical insights about how to understand and change conflict dynamics. Although this course is not a training course, it provides a foundation for those who want to teach conflict skills and conflict intervention methods to people in workplace, community and family settings. Knowledge of communication processes provides a solid foundation for such work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CNCM 5102. Media and Social Conflict. 3 Credit Hours.**

In today's media environment, social, political, and cultural conflicts play out in news, social media, and interpersonal media (i.e. text). This class explores the role media play in creating conflict, as well as facilitating inter- and intra-personal discussions regarding such conflicts. This will be explored at the family, group, community, and mass social levels. The positive and negative influences of media in creating, negotiating, and resolving conflict will be explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CNCM 5202. Methods for Conflict and Communication Research. 3 Credit Hours.**

This course is designed to prepare graduate students to engage in social science research in conflict and communication. Students will learn to design their own research studies as well as critique existing research based on credibility, validity, and reliability of design and methods. By the end of this course students will have designed and be prepared to execute an individual theory-driven research project, be able to evaluate conflict research, and be able to present a conference quality research paper. This course is designed to challenge students to not only be able to read and critique research but prepare them to conduct their own research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CNCM 5203. Data Analysis for Conflict and Communication Research. 3 Credit Hours.**

This course is designed to prepare graduate students to engage in social science research in conflict and communication. Students will learn to apply basic quantitative analysis skills to their own research studies as well as critique existing research based on credibility, validity, and reliability of analytic methods. By the end of this course students will be prepared to conduct basic statistical analysis of original and secondary data, use data tools such as Qualtrics and SPSS, and understand which statistical test is appropriate for different types of research questions. This course is designed not only to challenge students to be able to read and critique data analysis, but also to prepare them to conduct their own research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CNCM 5204. Advanced Data Analysis for Conflict and Communication Research. 3 Credit Hours.**

This course is designed to prepare graduate students to engage in social science research in conflict and communication. This course builds on the basic data analysis course (CNCM 5203) and helps develop advanced analytical techniques. Students will learn to apply advanced quantitative analysis skills to their own research studies as well as critique existing research based on credibility, validity, and reliability of analytic methods. By the end of this course students will be prepared to conduct advanced statistical analysis of original and secondary data, use data tools such as PROCESS, R, and SPSS, and understand which statistical test is appropriate for different types of research questions and hypotheses. This course is designed not only to challenge students to be able to read and critique data analysis, but also to prepare them to conduct their own research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in CNCM 5203.

**CNCM 5301. Cross-Cultural Negotiation. 3 Credit Hours.**

Research on the influence of culture on negotiation processes has grown extensively over the past twenty years across disciplines that include communication, management, political science, and psychology. Studies focus on negotiation in a wide variety of cross-cultural and intercultural contexts such as international diplomacy and multinational corporations. This course examines current theoretical issues related to the study of negotiation in intercultural contexts and explores insights gained from studying both culture and negotiation within these contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CNCM 9996. Conflict and Communication Thesis Research. 1 to 3 Credit Hour.**

This course is designed to aid students in their final thesis project. The course will provide a writers' workshop environment, including active peer and faculty feedback. Students will have opportunities to develop theoretical and written perspectives in a supportive group environment. Students will also have the opportunity to receive ample feedback and guidance on their final required thesis for the CNCM program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Counseling Psychology (CPSY)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CPSY 5492. Theories of Counseling Psychology. 3 Credit Hours.**

This course explores the function and essential elements of counseling theories and examines the student's philosophical beliefs as they apply to counseling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5511. Counseling in the Schools. 3 Credit Hours.**

First course for those concentrating in school counseling. The nature, techniques, and problems of school counseling are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5519. Group Counseling. 3 Credit Hours.**

An exploration of the functions of group counseling in meeting client/student needs. Emphasis on theory and principles of group process and on the development of group skills by participation in an experiential group counseling situation. Attention to the practice of effective group leadership skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5526. Multicultural Counseling. 3 Credit Hours.**

This course is designed to prepare culturally competent mental health counselors who demonstrate knowledge, self-awareness, and skills in working with individuals, groups, and communities who represent various cultural and personal backgrounds and characteristics. The class introduces major concepts, models, theories, and research from the multicultural counseling psychology literature. Through the provided material students will be exposed to both the art and science of multicultural counseling competence. This course represents the starting point to the ongoing process of multicultural counseling competence and students are expected to continue developing and learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5564. Addiction, Counseling, and Biological Bases of Behavior. 3 Credit Hours.**

Students will learn about the biological bases of behavior and their relations to human functioning, including the basic structure and function of the nervous system, normative neurological development and the biological functions implicated in common diagnoses, and the mechanisms by which common psychotropic medications affect the nervous system and behavior. Students will then explore the issues pertaining to the assessment, treatment, and prevention of addictions with the overall purpose of increasing our scientific and clinical expertise in working with individuals in counseling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5565. Educational Specialists Coordinating Community Resources for Diverse Learners. 3 Credit Hours.**

The purpose of this course is to support the development of students' school counselor identities. This course is designed to build off of previous school counseling coursework and further expand the knowledge and skills needed to address contemporary professional issues in school counseling K-12.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5566. Professional Issues in Mental Health Counseling. 3 Credit Hours.**

This core course is designed to introduce graduate students to the field of counseling so that you will be prepared to meet the professional challenges in your practicum and internship placements. As such, this course is similar to a survey course, in that you will be exposed to the breadth of the field; yet it is more, in that we will be covering some topics in more depth. For example, you will be reviewing professional identity issues, PA licensure requirements, needs of special populations, and counseling in special settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5571. Introduction to Counseling Psychology. 3 Credit Hours.**

For students not majoring in counseling psychology. A lecture-laboratory course focusing on the nature, history, philosophy, techniques, and problems of counseling psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5572. Interviewing Techniques. 3 Credit Hours.**

For students not majoring in counseling psychology. The theory and techniques of interviewing especially as they apply to problems of educational, vocational, personal and social counseling, rehabilitation, and employment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5579. Introduction to Couples and Family Counseling. 3 Credit Hours.**

An introductory course on theoretical and therapeutic components of major schools of thought within marital and family therapy using videotapes, training films, guest lecturers, simulations, and observation of family sessions to explore specific therapeutic behaviors that differentiate schools of thought. Focusing on perceptual, conceptual, and clinical skills of family therapists provides a foundation for future training in this area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5591. Legal and Ethical Issues in Counseling Psychology. 3 Credit Hours.**

To familiarize students and mental health professionals with the history and development of professional ethics and standards and their legal implications in the areas of counseling and psychotherapy. Topics include: privileged communication, confidentiality, rights of the client and agency, civil commitment, and licensure and mental health laws.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5593. Career Counseling and Development. 3 Credit Hours.**

Theories, strategies, and techniques of career counseling are described and illustrated. Research and theories in career development and decision-making are explored and related to lives of workers. Instruction is given in the work personality, history, and future of work, and needs of special populations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5668. Sem Counseling: Dev Psych. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5691. Diagnosis in Counseling Psychology. 3 Credit Hours.**

Course content focuses on historical perspectives related to psychopathology and diagnoses, diagnostic biases, and understanding the symptoms and treatment of major mental illnesses as they are expressed in a culturally diverse society. Pedagogical techniques include lectures, role-plays, and criterion-related exercises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5694. Introduction to Assessment. 3 Credit Hours.**

Training of students in interpretation and use of various methods of assessment and diagnosis in schools and agencies. Lectures and laboratory procedures are employed to integrate theory and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5698. Fundamental Counseling Techniques. 3 Credit Hours.**

The purpose of this course is to develop the basic skills students will need in order to conduct successful client-counselor interactions. We accomplish this through the practice and development of counseling microskills in an experiential format. Students will have an opportunity to begin to develop mastery of these skills through in class role-playing, mock interviews, and videotaped counseling session role-plays.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 5699. Crisis Prevention, Intervention, and Consultation. 3 Credit Hours.**

The purpose of this course is to provide students with both an understanding of the theoretical concepts of counseling as well as practice in further developing your clinical skills. Using the foundation of Fundamental Counseling Techniques, more advanced areas (such as crisis counseling) will be explored in preparation for practicum and internship placement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8701. Seminar in Counseling Supervision and Consultation. 3 to 12 Credit Hours.**

Focuses on the significance, structure, and techniques of supervision and consultation in the work of counselors. First-hand experience offered through supervising counselors-in-training. For advanced students in counseling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8764. Seminar in Counseling and Psycho-pathology. 3 Credit Hours.**

The objectives of this course are for doctoral students to develop an understanding of the etiologies, diagnoses, and treatment approaches of the major psychopathological disorders within a multi-cultural context, become versed in the application and use of the DSM, apply the scientist/practitioner approach to diagnosis and treatment issues, and develop process skills which will enable students to adapt to future changes in the area of psychopathology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8789. Seminar in Race, Culture, and Gender in Psychotherapy. 3 Credit Hours.**

The course focuses on the issues raised by diversity in the practice of psychotherapy. Students examine the literature and research related to this issue as well as their own perspectives and feelings. The attitudes, history, and culture of different groups in our society are reviewed. The objective is to assist students in integrating their knowledge of different groups and psychology with their self-awareness so they understand the demands of the transcultural therapist in a society with complex diversity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8790. Seminar in Counseling. 3 to 12 Credit Hours.**

Taught on a rotating basis by the graduate faculty in counseling. Current trends, research, issues, and professional problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CPSY 8791. Seminar in Learning Theory and Behavior Therapy. 3 Credit Hours.**

The history, philosophy, and theoretical perspectives of learning theory and behavior therapy are examined. Learning theory as the foundation for behavior therapy is explored. Techniques of therapy such as cognitive therapy, relaxation training, systematic desensitization, contingency management, and flooding are reviewed. Additionally, concepts related to behavioral humanism are introduced, particularly as they relate to marriage and family therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8792. Seminar in Theories and Systems of Psychology and Counseling. 3 Credit Hours.**

The course reviews and evaluates the theories and systems of psychology and counseling. Students explore how these theories and systems form the foundation for the current practices of behavior change and psychotherapy. Evaluative research related to the practices of psychotherapy and behavior change are examined. Students are expected to clarify their beliefs and theories about the therapeutic change process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8793. Seminar in Assessment. 3 Credit Hours.**

Emphasis on the knowledge, skills and methods in comprehensive psychological assessment in counseling psychology. Practice in diagnostic interviewing, comprehensive assessment, integration of data, and reporting results. Instruction in assessing different individual dimensions, disorders and populations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8794. Seminar in Group Counseling and Group Therapy. 3 Credit Hours.**

A didactic-experiential course focusing on selected theories of group counseling and psychotherapy, leadership training, research, and critical issues of the therapeutic management and/or facilitation of a counseling or therapy group.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8795. Seminar in Family Psychology. 3 Credit Hours.**

Taught from a scientist-practitioner perspective, the course covers the development of family psychology, and as a part of this movement, the conceptual and clinical foundations of family therapy, including integrative approaches.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8796. Seminar in Neuropsychology. 3 Credit Hours.**

The course focuses on the theories and research related to neuropsychology. The physiology of the brain and its interconnection with the psychology of the brain are explored. Further, the parameters and methods of neuropsychological assessment and remediation are reviewed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8797. Seminar in Legal and Ethical Issues in Counseling and Psychotherapy. 3 Credit Hours.**

To familiarize students and mental health professionals with the history and development of professional ethics and standards and their legal implications in the areas of counseling and psychotherapy. Topics may include: privileged communication, confidentiality, rights of the client and agency, civil commitment, and licensure and mental health laws.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 8799. Community Counseling Clinic. 3 to 12 Credit Hours.**

Clinical training with clients presenting vocational, educational, and personal problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CPSY 9085. Advanced Counseling Techniques. 3 Credit Hours.**

Provides counseling training experience that improves counseling skills and processes, while developing documentation and report writing skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**CPSY 9185. Master's Internship in Counseling Psychology. 3 Credit Hours.**

First-hand experience in doing the work of the counselor through placement in one or more appropriate settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CPSY 9285. Master's Internship in Counseling Psychology. 3 Credit Hours.**

First-hand experience in doing the work of the counselor through placement in one or more appropriate settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CPSY 9385. Internship in Counseling Psychology. 1 to 6 Credit Hour.**

This course is a one-year full-time experience working on the staff of an approved agency where counseling psychologists typically are employed. Placements are tailored to satisfy the professional training needs and interest of students. Emphasis is on advanced skill development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CPSY 9387. Practicum in Counseling Psychology I & II. 3 to 12 Credit Hours.**

This is a two-sequence course that provides students with exposure to the professional environments that they plan to be employed in the future (i.e., agencies or schools). Students will be involved in a variety of supervised activities at their program-approved sites (i.e., individual, couples, group, family counseling; various administrative and professional development activities).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CPSY 9982. Independent Study in Counseling. 1 to 12 Credit Hour.**

Intended to meet the needs of students who desire to carry on an individual investigation. For advanced students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CPSY 9999. Doctoral Dissertation in Counseling Psychology. 1 to 6 Credit Hour.**

Registration limited to candidates for the Ph.D. program who have successfully completed the preliminary examination and the minimum hours of course work required for the degree. Continuous registration during the fall and spring semesters is required until the dissertation has been completed and accepted by the Graduate Board.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Criminal Justice (CJ)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**CJ 5001. Evidence-Based Policing. 3 Credit Hours.**

The aim of this course is to introduce police professionals to the growing body of research and knowledge about their job, and develop a desire to merge evidence-based practice into their professional life. Evidence-based practice is about making decisions through the conscientious, explicit and judicious use of the best available evidence from multiple sources by asking an answerable question, acquiring evidence, critically appraising the trustworthiness and relevance of the evidence, aggregating the evidence together, applying the evidence into the decision-making process, and assessing the outcome. The course is also designed to help practitioners understand what is necessary to develop their own evidence about work practices. On successful completion of the course, students will be able to contrast the evidence-based approach to opinion, expertise and experience; summarize influential studies in policing; and systematically gather, collate, assess and weigh evidence on a topic from various sources.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 5012. Crime Science Tools and Techniques. 3 Credit Hours.**

The aim of this course is to provide a structure and framework for the development of skills in crime science, and the evaluation of crime prevention strategies. Course components will include structuring projects for evaluation, the appreciation of crime prevention mechanisms, data preparation, process and outcome evaluation, time series analysis, and the use of spatio-temporal techniques such as the weighted displacement quotient. On successful completion, students will be able to set up crime prevention projects, monitor ongoing implementation, and assess any crime reduction outcomes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 5021. Ethical Governance. 3 Credit Hours.**

Ethical governance refers to organizational practices designed to achieve value-driven policing across the ranks. It strives to align everyday policing operations (both internally and externally) with enduring democratic values, including policing by consent, access to justice, equality, equity and respect for human rights. In a democratic society, such values must be sustained both within police organizations as well as externally, through relationships with citizens. Police leaders, policy-makers and scholars are looking afresh at mechanisms for enhancing ethical governance, particularly in light of recent threats to police legitimacy. In order to balance evidence-based policing with core organizational values, police leaders must cultivate and develop officers that perform with the highest levels of community commitment, integrity, and innovation. This course canvasses important concepts, debates, visions and practices in ethical governance, providing students with the tools to critically examine challenges and opportunities in their own organizational environments. The aim of this course is to identify and critically examine the ethical dimensions of leadership in a democratic society, and to explore ways of aligning police operations and administration with enduring organizational values.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 5022. Developmental Leadership. 3 Credit Hours.**

This course will help graduate policing students develop an appreciation for formal and informal leadership roles and how best to influence differing groups of followers. In light of increasing public and media scrutiny of police interactions with minority group members, understanding leadership in tense or in extremis situations is invaluable. Understanding detractors from effective leadership such as bias and the potential for dehumanization are important to understanding the common reactions when in the role of police officer. Students will consider the need for flexibility across the various environments and activities encountered by police.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 5023. Seminar in Executive Management. 3 Credit Hours.**

The aim of this executive seminar program is to ask students to reflect on their core values, and those of their agency and to think more critically about how these interact with the competing core values of other branches of city government, other police departments and aspects of the judicial system, and stakeholders from outside of government, such as private industry, the media, community and protest groups. In a seminar setting alongside the course instructor as moderator and an invited guest, each week provides an opportunity to meet leaders from outside of policing, identify areas of common ground, and cultivate a deeper, more critical understanding of the student's role leading one of the major arms of government. Students will emerge with a clearer sense of their role in directing and forming the vision, culture and ethos of their organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8101. Decision Making in Criminal Justice. 3 Credit Hours.**

Core Course. Conceptualizes criminal justice as a series of interrelated decision stages. Examines organizational, legal and research issues related to each decision stage.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8102. Research Methods in Criminal Justice. 3 Credit Hours.**

Core course. Assumes prior familiarity with basic methodology and statistics. Prepares students to conduct criminal justice research and evaluation. Covers topics of causality, reliability, validity, and quasi-experimental methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8104. Law and Social Order. 3 Credit Hours.**

Core Course. Examines moral, practical, legal, and constitutional limitations of law as a means of securing social order. Classes and readings are designed to promote critical analysis of primary (constitutions, statutes, cases) and secondary (legal, philosophical, social science literature) sources of law, with special focus on the role of the Supreme Court in balancing state vs. individual interests and on rules and standards by which the Court's discretion and decision-making can be assessed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8105. Statistical Issues and Analysis of Criminal Justice Data. 3 Credit Hours.**

Core Course. Introduces criminal justice graduate students to simple and multiple regression analyses in criminal justice research. Extended treatment of the detection of non-normal data through the use of graphical and statistical techniques, and the statistical implications of highly non-normal data that are encountered in many areas of criminal justice. Clarifies relations between statistical assumptions, results, and use of results for decision making purposes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8106. Theories of Crime and Deviance. 3 Credit Hours.**

Core Course. The goal of the course is to provide an appraisal of the foundations for understanding criminal behavior. Students read major current and classic works couched at different levels of analyses about the origins of criminal behavior including not only violent and property crime but also delinquency, white collar crime and regulatory violations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8202. Corrections. 3 Credit Hours.**

Analyzes the theory, practices and policies of the American correctional system, covering the nature and administration of both institutional and community sanctions and agencies. Students explore competing penal theories and review evidence on the effectiveness of correctional practices. The course investigates the historical development and evolution of imprisonment, trends in the use of confinement, and the effects of incarceration on offenders, families and communities. Students analyze the characteristics of correctional populations and debate the causes and implications of race, class and gender differences. The course identifies significant current issues and reviews the ethical, legal and practical dimensions of proposals for reform. Note: Prior to fall 2016, the course title was "Correctional Philosophy and Administration."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8203. Issues in Law Enforcement. 3 Credit Hours.**

This course focuses on conceptual models of policing and how they affect operational priorities and resource decisions in law enforcement. Topics include community policing, problem-oriented policing and intelligence-led policing, among others. This is a wide-ranging course that explores policing from an international perspective and through the lens of the varying contentious issues of the day.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8204. Policy and Practice in Juvenile Justice. 3 Credit Hours.**

This course is designed to increase the student's understanding of the purposes, structure and processes of this distinctly American invention, the juvenile justice system. Together, we explore its recent development and current policy initiatives that are reshaping its role in our society. We also look at the target of this system: delinquent kids. We examine the juvenile justice system in terms of its underlying aims, its historical foundations, and its sociopolitical contexts, explanations of delinquency, theories of child development, case law, legislation, changes now occurring with respect to its goals, and recent initiatives to increase dependency on scientific evidence of effectiveness. In doing so, we seek to understand the system's limitations, contradictions and strengths. At the same time, we examine the role that research plays in shaping the policies and programs that constitute this system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8205. Aggression and Violence. 3 Credit Hours.**

Students will learn about different types of violence in the United States, including homicide, assault, robbery, family violence, youth violence, drug related violence, and gun-related violence. A three-part, interdisciplinary perspective guides this inquiry: (1) examination of patterns and trends, (2) examination of correlates and causes, including biological, psychological and sociological theories, and (3) investigation of different policy responses to violence. At the conclusion of the course, students should be able to do two things: (1) critically discuss major explanations that have been offered for different kinds of violent behavior, and (2) critically evaluate policies for preventing and controlling specific types of violence.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8222. Simulation Modeling. 3 Credit Hours.**

Social organization involves complicated systems, such as organizations, institutions and families - and their component parts. The components of systems frequently interact in a complex fashion. Simulation models offer a useful approach to understanding this complexity. Simulation models allow for the creation of theoretically informed representations of complex dynamic systems. These representations can be used to conduct virtual experiments with the goal of strengthening theories and developing better designs for empirical research. The course covers different types of simulation modeling, but focuses on applications of Agent-Based Modeling. Students will gain experience developing conceptual models and programming simple simulation models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8223. Risk, Prediction and Classification. 3 Credit Hours.**

This course focuses on issues surrounding prediction and classification in criminal justice. We examine different perspectives on risk and danger, risk assessment models, the possibilities of accurate predictions, and the implications (practical, social, ethical) of prediction and classification in criminal justice. These include career criminal models and their repercussions in criminal justice policy, the role of risk assessment instruments in community corrections, inmate classification and release, and others. In addition to these practical applications, we will consider the implications of the increasing salience of the notion of "risk" in public and policy discourse.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8224. Drugs, Crime and Justice. 3 Credit Hours.**

This advanced graduate course considers the problems of drug abuse, crime and the justice system's response to drug-related crime. A multidisciplinary perspective is used to analytically and critically explore these issues from social, legal, political, public health, enforcement, and criminological perspectives. Specific topics covered include theoretical explanations for drug abuse, drug legalization and decriminalization, drugs and violence, treatment alternatives to incarceration, public health effects, and mandatory sentencing laws for drug offenders. Readings, papers, and in-class discussions and formal debates are used to further students' understanding of the connections between drug abuse and crime, effective criminal justice responses to drug-related crime, and drug policies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8225. Rehabilitation, Reentry and Recidivism. 3 Credit Hours.**

Numerous prison- and community-based approaches have been developed in recent years to help ex-offenders successfully reintegrate into the community. Promising in-prison approaches include comprehensive risk/needs assessment, drug treatment, cognitive behavioral treatment, vocational and basic education, prison industries, and prerelease planning. Community-based approaches include a wide range of options that provide reintegration assistance and linkages to community social services. In this class, we examine theoretical models of rehabilitation (e.g., principles of effective correctional intervention) and recidivism (e.g., life course and reintegration perspectives), including related research, and we investigate current re-entry initiatives at the national, state, and local levels.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8226. Transnational and Global Crime. 3 Credit Hours.**

Global criminology is an emerging field covering international and transnational crimes that have not traditionally been the focus of mainstream criminology or criminal justice. This course will examine the diverse dimensions of global and transnational crime. Students will examine and discuss historical and contemporary patterns, modus operandi, capabilities, and vulnerabilities of global and transnational criminals and organizations. Course content includes an introduction to global and transnational crime, a discussion of the "problem" of global and transnational crime, a review of illicit activities of criminal organizations, an examination of the link between transnational crime and harms, and a review of contemporary approaches to combating global and transnational crime. The seminar will include a review of organized crime, corporate crime, cybercrime, and terrorism and war in Europe, Russia, the Middle East, Asia, Africa and The Americas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8227. Contemporary Issues in Youth Crime: Gangs. 3 Credit Hours.**

This course explores the modern urban street gang by investigating the extensive history of theory and research on street gangs. The first half of the course will attempt to answer such questions as: Why do youth and young adults join gangs? Why do they leave? Are street gangs similar to other deviant groups, delinquent networks and/or pro-social groups such as fraternities? The second half of the course will focus on the community response to gangs with a heavy emphasis on comparing and contrasting a variety of "evidence-based" models of gang prevention and intervention. By the end of the semester students will have an in-depth understanding of why the problems of gangs and gang violence remain so intractable today, and will be able to identify a number of areas where theory, research and practice have failed to connect.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8228. Race, Crime, and Justice. 3 Credit Hours.**

The strong connection between race and crime in the United States occupies the discourse of media, policy-makers, and scholars, alike. This course considers the examination of race as a central concern for scholars of criminal justice especially in an era of mass incarceration. Specifically, we engage in the following questions: How large are racial and ethnic differences in criminal involvement? How do we theoretically construct and measure race and how do these measurements impact how we understand racial categories and crime? What are the implications of these "facts" on the popular understanding of the race-crime connection? What role do criminal justice apparatuses (police, courts, jails, for instance) play in reproducing and amplifying ideas about race and crime? Using various interdisciplinary theoretical approaches, we examine the complex ways in which race-crime-criminal justice is both a product of societal forces and an "engine" reproducing racial arrangements and power relationships in society.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8232. Crime Mapping. 3 Credit Hours.**

Spatial distribution of crime and criminals is examined in relation to the geographic processes that influence this distribution. This course involves half seminar and half lab work. Seminars include the structure of geographic information and spatial analysis techniques, alongside spatial theories of crime and how these theories can explain crime patterns. Lab work instructs students in the use of GIS to map and analyze crime events, from the national level down to the city level. The GIS and crime mapping component assumes no prior knowledge of GIS, uses the latest ArcGIS software, and concentrates on crime in the City of Philadelphia. Note: Prior to fall 2016, the course title was "Geographical Perspectives of Crime."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8233. Communities and Crime. 3 Credit Hours.**

This course addresses the connections between features of community, and crime, fear and disorder, at various levels of analysis ranging from the community to the street block. It covers varying theoretical perspectives on these connections, with the aim of educating students in the relative strengths and weakness of these various perspectives. Students learn to apply these various perspectives and tools to case studies and actual locations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8234. Criminal Victimization and Criminal Justice. 3 Credit Hours.**

This course explores the problem of victimization [general vs. criminal], the types of victims [direct vs. indirect; individual vs. collective, etc.], and the harms involved [financial vs. physical vs. mental]. It also examines the fairness and efficacy of a wide variety of preventive, remedial, extra-legal and legal [civil, criminal] responses by society and by the criminal justice system. Emphasis is upon data sets and research studies shedding light upon the levels, correlates, dynamics, and consequences of major forms of victimization, as a basis for critical analysis of victimization theory and existing and potential laws, policies, programs, practices, and technologies for reducing its incidence and impact.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8236. Organized Crime. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8237. Program Planning and Evaluation in Criminal Justice. 3 Credit Hours.**

Program evaluation is the systematic acquisition and assessment of information to provide useful feedback about a program. In other words, program evaluation facilitates improvements in program performance and outcomes. Evaluation also enables policy makers and funding agencies make decisions about continued support of a program or program replication. Students in this course will develop the capacity to develop and produce useful feedback. They will gain a thorough knowledge of the methods of program evaluation, from the point of framing the goals of the evaluation to communicating findings. Topics will include: assessing the evaluability of the program, logic models and theories of change, formative and summative evaluations, experimental and quasi-experimental designs, data sources and data collection, analyzing and interpreting data, reporting findings, the utilization of results, and synthesizing findings across evaluation studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8302. Advanced Methods and Issues in Criminal Justice Research. 3 Credit Hours.**

Course involves students in hands-on activities allowing them to learn how to conduct and evaluate different types of research approaches commonly used in criminal justice. Course assumes a solid grounding in graduate-level research methods, and strong multivariate quantitative skills. These "learning by doing" activities, ideally organized around a single topic and conducted for a specific client, are complemented by high level discussions of and readings about key ongoing philosophical, pragmatic, and policy related research issues, and how those issues apply to and play out in the fields of criminal justice and criminology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8305. Advanced Statistical Issues in Criminal Justice Data. 3 Credit Hours.**

Focuses on multivariate statistical techniques particularly important in criminal justice research questions. Course may cover multilevel modeling, or other techniques important to the discipline such as time series, clustering, and automatic interaction detection.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**CJ 8310. Special Topics Seminar. 3 Credit Hours.**

Special topics in criminal justice research are examined. Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 8320. Seminar in Criminal Justice Policy. 3 Credit Hours.**

Special topics in current criminal justice policy are explored. Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 8330. Seminar - Advanced Research Topics. 3 Credit Hours.**

Advanced topics in criminal justice and criminological research are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 9082. Independent Study. 1 to 3 Credit Hour.**

Permits individualized study of a specific topic in consultation with a faculty member. Not intended as a substitute for any required course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 9083. Directed Readings. 1 to 9 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 9991. Directed Research. 1 to 9 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 9996. Thesis Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Registration required each semester after Preliminary Examinations while researching the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**CJ 9999. Doctoral Dissertation Research. 1 to 6 Credit Hour.**

Restricted to students who have passed the Preliminary exams and filed an approved proposal with the Graduate School.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Dance (DANC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**DANC 8801. Dance Techniques. 1 Credit Hour.**

This course provides insight to the choreographic process of a master choreographer through learning and performing a major work.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8803. Rhythm: Analysis, Performance and Composition. 3 Credit Hours.**

This course offers students the opportunity to engage in a comprehensive study of rhythm as a dance-related discipline at the graduate level. It focuses on the basic elements of rhythm and movement, and how these develop the student's understanding of motion as a sequence of effort and rest. Capacities for analysis and performance of rhythm within dance and musical contexts will be cultivated.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8804. Dance and the Child. 3 Credit Hours.**

This course addresses theories of child development and learning as they relate to the teaching of dance in K-12 education. Content is organized around a series of questions that a dance teacher might have regarding how their students are experiencing dance in a school setting. Topics include developmental milestones and their impact on dance curriculum, integration of dance into the broader school curriculum, and cultural issues in dance education. Students gain hands-on experience in a peer teaching setting and begin to build concrete resources for teaching dance in K-12 settings. This course satisfies the elementary education coursework requirement for the K-12 Dance Teacher Certification through the Bureau of Career and Technical Education.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8805. The Dancer and the Dance Medium. 1 Credit Hour.**

A core course required of all entering graduate students. Participants engage in independent and collaborative inquiry to elucidate individual values and understandings of dance in a social learning context. Class projects include development and performance of personal dance histories and peer presentations based on areas of student expertise or interest. Emphasis is on clarification of personal voice as an important source of goal setting in graduate dance education.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8806. The Creative Process and the Dance Symbol. 3 Credit Hours.**

This core course deals with sources and processes for creative transformation. The class examines the individual as an artist and explores various influences, congruencies, symbols and meanings affecting the art form today. It is a studio course with assignments ranging from reading and writing to choreographing and performing.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8808. Corporeal Improvisation. 1 to 2 Credit Hour.**

This course lays the groundwork for dance improvisation as technique, as inquiry, and as performance. Exercises to develop and deepen an experiential understanding of anatomy and physical laws serve to expand physical range and imagination. Practice of improvisational directives and personal experimentation of movement concepts and the elements of dance increase awareness of individual stylistic and movement preferences and strengths, as well as areas of weakness.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 8809. Graduate Repertory. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.



**DANC 8812. Performance Environments I: Dance Production. 2 Credit Hours.**

Students master basic technical theater skills, and encounter design theory and practice, with emphasis on preparing them to serve as stage managers, and expose them to the vocabulary and objectives in costume, lighting, set design, theater make-up, the use of projections, and specifications for creating theater in non-theatrical spaces.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8815. Performance Environments II: Producing Dance. 2 Credit Hours.**

A professional and practical course emphasizing the development of tools and skills necessary for realizing individual goals, vehicles, and processes for change in the various fields of dance and related arts within our society.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8821. Modern Dance Technique I B. 1 to 2 Credit Hour.**

This course addresses the development of basic movement skills and concepts as a means toward effective performance.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 8822. Modern Dance Technique II A. 1 to 2 Credit Hour.**

This course addresses the development of basic movement skills and concepts as a means toward effective performance.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in DANC 8821.

**DANC 8823. Modern Dance Technique II B. 1 to 2 Credit Hour.**

This course addresses the extension of range, control, and clarity of performance for more complex dance sequences.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in DANC 8821.

**DANC 8824. Modern Dance Technique III A. 1 to 2 Credit Hour.**

This course addresses the extension of range, control, and clarity of performance for more complex dance sequences.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in DANC 8823.

**DANC 8825. Modern Dance Technique III B. 1 to 2 Credit Hour.**

This course addresses increased technical accuracy, sensitivity, and versatility of performance. The dance material offered covers a wide range of spatial, dynamic, and rhythmic qualities.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in DANC 8824.

**DANC 8826. Modern Dance Technique IV A. 1 to 2 Credit Hour.**

This course addresses increased technical accuracy, sensitivity, and versatility of performance. The dance material offered covers a wide range of spatial, dynamic, and rhythmic qualities.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in DANC 8825.

**DANC 8827. Modern Dance Technique IV B. 1 to 2 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 8828. African I. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8829. African II. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8831. Intro Laban Movement Analysis. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8832. Ballet Technique II. 1 Credit Hour.**

This course provides further skills in basic classical ballet vocabulary and preparation for professional study at the intermediate level.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 8833. Ballet Technique III. 1 Credit Hour.**

This course addresses advanced vocabulary and skills for increasing demands of more complex combinations and sequences.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in DANC 8832.

**DANC 8834. Ballet Technique IV. 1 Credit Hour.**

This course provides movement experience to develop confidence and skill for an authoritative and expressive performance. The full range of classical ballet vocabulary is used.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in DANC 8834.

**DANC 8835. Dance on Video. 3 Credit Hours.**

A hands-on course exploring the practical and aesthetic considerations in recording dance. Video equipment and recording techniques will be introduced, with a survey of selected dance video works.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8836. Pointe I. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8837. Pilates: Body Condition. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8838. Pilates II: Applications. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8839. Movement Theater Workshop. 3 Credit Hours.**

This course is designed to provide intensive experience exploring the whole body as a medium for theatrical expression, and developing group collaborative processes.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8841. Apprenticeship in Dance. 1 to 6 Credit Hour.**

Designed to allow the student to practice, challenge, and expand artistic skills in a professional environment, and under the guidance of a mentor. Credit will not be awarded retroactively.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 8842. Graduate Jazz Dance Level II. 1 Credit Hour.**

This course provides a more sophisticated approach to jazz dance vocabularies and sensitivities used in contemporary dance and theater.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8843. Graduate Jazz Dance Level III. 1 Credit Hour.**

This course provides a complete integration of the approach to jazz dance vocabularies and sensitivities used in contemporary dance and theater.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in DANC 8843.

**DANC 8845. Sound and Movement Partnerships. 3 Credit Hours.**

With its basis in 20th-century or modern performing arts, this course offers both a practical and a philosophical perspective on essential topics of sound and movement partnership in an effort to train the eye and ear to perceive dynamic relationships between sound and movement. Critical to this class are the investigation of performance and composition skills and the critical discussion of choreographic issues. This class in music and dance composition challenges student choreographers to discover inventive sound and movement partnerships for the creation of new work.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8847. Choreographing Philadelphia. 3 Credit Hours.**

This intensive course addresses the city of Philadelphia - its history, geography, architecture, infrastructure, people, and dancing communities - as subject and site for the creation of choreography. Working solo and in teams students explore a variety of approaches to creating work in and about the city.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8848. Modal Practice, Structure and Performance. 3 Credit Hours.**

This intensive studio course explores the practice and application of uni-focal creative research methodologies for training the body, movement invention aligned to conceptual intent, and creating choreography that elicits meaningful and personally invested performance.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8849. Studio Research. 1 Credit Hour.**

This course takes place every semester and it operates as an opportunity for students to engage in independent studio practice (both through dance technique and composition) within a mentored framework. This course is conceived as a 'practice laboratory' in which students will be required to maintain and reflect upon their embodied learning and to pursue new lines of choreographic enquiry.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 8851. Choreographic Projects. 1 to 6 Credit Hour.**

Graduate students develop original work with the guidance of dance faculty. The course culminates in the performance of the new work developed in the class in a final showing with modest technical elements.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 8852. Non-Western Dance Traditions. 3 Credit Hours.**

This course is an overview of dance traditions outside North America with the exception of selected Native American traditions. The course includes movements from Asian, African, South American, and Pacific Rim traditions. The goal is to increase the student's knowledge of dance traditions; further their understanding of spatial, religious, and social restrictions on the dances; and inform their choreographic processes by exposure to different ways of constructing movements. This is primarily a studio course with assignments geared to choreographic inquiries that extend the student's aesthetic parameters in terms of movement vocabulary and structure.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8853. Lighting Design for Dance. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8859. Dancing the City. 3 Credit Hours.**

In Dancing the City students explore the research methods of two powerful modes of inquiry - oral history and dance ethnography - in order to study the dance companies, communities of practice, and artists who interact in the unique spaces and dynamic social patterns of the city. Students theorize and think critically about the concepts of "space" and "the city," as they conduct individual research studies on dance in its various socio-cultural manifestations in the city. NOTE: Prior to fall 2015, the course title was "Writing the City."

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8861. Dancing Self in Community. 3 Credit Hours.**

This course provides a site for autobiographical and community practice research. It enables a diverse entering body of graduate students to retrieve, situate, and articulate their personal histories in dance, including clarification of aesthetic values, both tacit and theorized, and to contribute their individual voices to a community performance project.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8862. Embodied Craft. 3 Credit Hours.**

This is a studio course that also uses readings, group discussion, contemplative practices and writing to inform students' choices about all the elements necessary to craft dance including movement invention, spatial considerations, sound, music, silence, choreographic devices, performance arenas and dancers.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8865. Dance Science & Somatics. 3 Credit Hours.**

Somatic exploration and conceptual comparison of three systems of movement awareness and transformation/rehabilitation: ideokinetic facilitation (Sweigard), body mobilization in space (Bartenieff), and traditional sports/dance medicine. Six themes are interwoven through the course: physiological bases of dance training; conditioning to address individual needs in dance training; the causes, pathology, care, rehabilitation, and prevention of dance injuries; dancers and wellness; application of motor learning and control to dance pedagogy; and mental imagery to enhance performance.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8866. The Body Politic. 3 Credit Hours.**

The course will conduct a multi-site exploration of "the body politic" as an everyday expression, as the creative formation of modern experience and personhood, as stimulation, as geography, as historical memory and as transcultural signification. This course will focus on introducing students to selected core theories of dance culture and cultural studies as it relates to the body politic.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8867. Educational Inquiry in Dance. 3 Credit Hours.**

Students in the MA, MFA and PhD Dance programs design, implement, and evaluate an exploratory/pilot study in a selected area of dance education. The study may involve action research/fieldwork, curriculum design, advocacy, educational internship, or other form of inquiry relevant to education in and through dance.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8868. Graduate Seminar. 2 Credit Hours.**

This course provides an overview of methods and materials for producing choreographic work and securing teaching employment in an evolving field. Emphasis will be placed on developing materials that reflect each student's personal mission statement and career objectives.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8869. Dance Teaching Seminar. 2 Credit Hours.**

This course assists graduate students in developing a sound basis for their continued growth and effectiveness as dance educators. Grounded in theories of holistic education, critical pedagogy, and reflective practice, the course integrates studio experiences, observation, theoretical inquiry, and teaching practice to examine key values adhering to the noble profession of "dance teacher."

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8871. Apprenticeship in Teaching Dance. 1 to 3 Credit Hour.**

This course provides a supervised internship in teaching dance supported by video assessment, one-to-one mentoring, and peer discussion groups.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8872. Educating Dance. 3 Credit Hours.**

This course addresses philosophical, historical, and contemporary perspectives in dance education. Topics include: history of education and arts/dance education, philosophical foundations of dance as a mode of learning, critical and feminist pedagogies in dance, social issues in dance teaching and learning (gender, sexuality, race, ethnicity, culture, ability, age), and recent developments in cognitive neuroscience (embodied cognition) and technology.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8873. Concepts of Culture. 3 Credit Hours.**

"Concepts of Culture" is a graduate course that seeks to show how dance practice is shaped through cultural production and how the moving body has the capacity to maintain, negotiate or re-imagine the social context in which it exists. It explores the meanings and values of "culture" and conceives culture as a site of contested power relations through which dominant structures are both maintained and challenged.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8874. Foundations of Cultural Studies. 3 Credit Hours.**

This course examines performance structures, social paradigms, and dominant themes. The course is taught from a comprehensive, comparative perspective of intersecting identities, including race, gender, class, and sexuality by examining and discussing major theorists in the field and analyzing performances based on those theorists. This course also traces the intellectual heritage of cultural studies vis-a-vis scholars, artists, educators, activists, workers, and community members. The lectures, readings, video viewings, discussions, and movement experiences attempt to examine the diversity and similarities in cultures.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8875. Arts Advocacy. 3 Credit Hours.**

This course provides information, models and practical design experience in advocacy for dance in various settings. Emphasis is on pertinent literature, current trends, and practice guided by student professional goals.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8876. Dance as a Mode of Learning. 3 Credit Hours.**

This course integrates philosophical/historical perspectives of dance as a mode of learning with critical analysis of existing curriculum frameworks and a curriculum design project.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8877. Dance Administration. 2 Credit Hours.**

This course studies and analyzes historical, philosophical, and practical aspects of arts and dance administration. Emphasis is on practical skills, including curricular, administrative, and fiscal design and structures.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8878. Graduate Dance Composition. 2 Credit Hours.**

A course designed to confront the elements of dance composition through improvisation, short movement studies, and dances that are presented, discussed, and reworked in class. A final composition demonstrates skills, sensitivities, and understandings acquired.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 8879. Prof Portfolio Evaluation. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9800. Special Topics in Dance. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9801. Research Methods in Dance. 3 Credit Hours.**

The course provides a foundational introduction to theories, methodologies, questions, and themes in contemporary dance research and fosters the capacity for students to develop a critical and analytical voice, as well as independent research skills. Students will immerse themselves in key texts (verbal, audio-visual, and kinesthetic) that illuminate epistemological foundations, historical trends, current practice, and future directions of dance as a mode of human inquiry.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9804. Neoclassicism and the Baroque Revival in Twentieth-Century Dance and Culture. 3 Credit Hours.**

This seminar explores tensions in the field of neoclassical ballet and the baroque dance and music revival - both significant aspects of modernism and postmodernism - in the critical context of tradition vs. classicism, and the early twentieth-century phenomenon of the rediscovery of seventeenth-century French culture. We examine the imbrication of these questions with the rise of fascism in the early twentieth century and the return of the baroque since the 1950s and 1960s, which reached an apogee in the 1980s in both Western Europe and the United States.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9806. Somatic Theater. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9831. Moving Across Genres. 3 Credit Hours.**

This is a three (3) credit course in which we examine performance genres, social parameters, and discourse language. In this course we will investigate problematizing language in dance genres. Ballet as a lingua-franca, the specific language of selected Indian dances, hip-hop language and divisions such as old school, new school, traditional and neo-traditional, classical and neo contemporary and modern and contemporary dance will be discussed in relation to their relevance and viability to dance studies.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.



**DANC 9841. Experience, Engagement and Multi-Sensory Inquiry. 3 Credit Hours.**

This course focuses on theories and methods that view human experience and embodiment as the ground of knowledge and meaning making. The course is informed by diverse sources including life experience, dance, phenomenology, existentialism, humanistic sociology, psychoanalytic theory, cognitive neuroscience, and aesthetics, particularly the emerging field of bio-aesthetics.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9851. Black Performance. 3 Credit Hours.**

Using a chronological and geographical approach, this course traces performance trends in dance, music, and theater from West Africa to the Caribbean to the U.S. Examples of commonality and continuity are explored in selections from Yoruba, Akan, Vodun, and African genres.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9852. Dancing the Popular. 3 Credit Hours.**

Dancing the Popular is a doctoral course that seeks to examine "popular dance" within its multiple contexts of production, circulation, consumption and participation. It takes as its starting point the notion of "the popular" as a contested and value-laden category and explores how historically-located definitions conceive "popular culture" in a variety of ways.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9861. Dance and the Gendered Body: Historical Perspectives. 3 Credit Hours.**

Students learn ways of analyzing representations of women, men, people of color, sexualities, and class distinctions in dance performance situated in different historical periods, cultural contexts, and performance venues. Students learn how to write historical narratives by locating primary sources and discovering the different voices/perspectives involved in a particular dance production, genre, ritual, performance, and practice. The course culminates in an ensemble performance based on individual research projects and reflexive understanding of how the researcher's identity intersects with the research. The emphasis is on research as performance and performance as research.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9862. Bodies, Texts, History. 3 Credit Hours.**

Using an approach that intertwines a historical mode of inquiry of dance productions/ performances/practices with gender theory/queer theory, this course explores historically and culturally specific topics in dance. In other words, the approach to dance history will be topical rather than chronological, and guided by the diversity of student research agendas.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9875. Meaning in Dance. 3 Credit Hours.**

This course focuses on methodologies for dance research that start with human experience (phenomenology, autobiography, autoethnography, and humanistic sociology) as the generative ground of meaning making. Students engage with multiple perspectives and layered practices to illuminate "lived experience" in dance. In a guided seminar setting, each student completes an annotated bibliography, a critical review of the literature, and/or a research study related to a topic of individual interest. Students present their work, at various phases of development, to their peers for critical review.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9883. Dir Study in Dance Research. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9889. Dance Field Experience. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9951. Aesthetic and Philosophical Inquiry. 3 Credit Hours.**

Designed to introduce, analyze, and teach students to employ aesthetic and philosophic methods of inquiry to dance. Selected written and performance texts demonstrate various pathways research might travel to unveil the philosophic bases of dance.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9956. Research Structure: Dance Ethnography. 3 Credit Hours.**

This course covers a range of methods, techniques, and ethical concerns in dance research, including ethnographic methods and techniques of oral interview. In a guided seminar setting, each student develops an original research plan of design and presents it to her/his peers for critical evaluation.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**DANC 9984. Master's Concert in Dance. 1 to 6 Credit Hour.**

Limited to those who plan to earn the master's degree by completing a major choreographic work. Normally not taken before the fifth or sixth semester of study and after the completion of a minimum 42 credits, including all required coursework in choreographic skills and resources and stage managing, as well as comprehensive exam requirements.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9991. Directed Research-Dance. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9994. Preliminary Examination Preparation. 1 to 3 Credit Hour.**

The student demonstrates the ability to complete independent academic projects by preparing a course proposal and an article judged to be of sufficient quality to be published in a professional journal.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9995. Master's Project in Dance. 1 to 6 Credit Hour.**

Limited to those who plan to earn the master's degree by completing a project. The final project option for Ed.M. candidates who register for 3 s.h. Also available to M.F.A. candidates for a 6 s.h. final project if decided in advisement with major curriculum advisor.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9996. Master's Thesis in Dance. 1 to 6 Credit Hour.**

Limited to those who plan to complete the master's degree by writing a thesis. Note: This option is available only to those who have successfully completed DANCE 9951: Aesthetic and Philosophical Inquiry. Registration is done in advisement with major advisor.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9998. Pre-Dissertation Research. 1 to 3 Credit Hour.**

The student prepares a proposal for dissertation research with guidance from the major advisor. The proposal is formally presented before the Sponsoring Committee and, if approved, passes on to the Graduate School, where it must be approved before the student can be advanced to candidacy. Student must have passed preliminary examinations to enroll.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**DANC 9999. Doctoral Dissertation. 1 to 9 Credit Hour.**

The dissertation is advised by the major advisor and the two additional faculty members of the Sponsoring Committee. At the time of defense, one or two faculty members are added, comprising and examining committee of at least four members.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Dance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Dental Public Health Sciences (DPHS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**DPHS 5089. Planning and Evaluation of Field Experience in Dental Public Health. 5 to 8 Credit Hours.**

The overall goal of this course is to provide students with practical experience in the planning, development and/or conduct of an oral health program/project/study. This course will require a statement of objectives and planned procedures prior to the field placement in a selected affiliation site. This will be prepared by the student, working in concert with the advisor and field supervisor. The student will also be required to present a formal evaluation report of the field experience to his or her advisor after its completion. The field supervisor will be asked to complete an evaluation form on the resident's performance. This evaluation will then become part of the resident's file, and a permanent record that the field experience was completed satisfactorily.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may be repeated for additional credit.

**DPHS 8001. Foundations of Dental Public Health. 3 Credit Hours.**

This course is the dental public health student's introduction to the discipline. It presents a social and historical context for dental public health, and provides a basis for the more detailed examination of other aspects of the discipline which are covered in other courses. Students will learn about the public agencies and professional organizations involved in dental public health activities, and will have the opportunity to compare and contrast the structure of public health dentistry in the U.S. with that in other countries. Recent activities, projects, and publications in dental public health will be discussed. Practitioners in dental public health need to be able to locate information efficiently, to appraise its value, and to use that information in writing and speaking. They need to be confident in their ability to write clearly and to speak assertively in public. This course aims to provide students with the necessary skills and knowledge needed to locate information, judge its quality, and present critical summaries using written and oral communication. The course also allows students to develop confidence in their writing and public speaking.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DPHS 8002. Administration in Dental Public Health. 2 Credit Hours.**

This course is designed to address the following topics: Models of public organization, administrative decision-making, patterns of administrative communications, role and function of administrative leadership, nature and function of public personnel and fiscal management systems, planning, operating, and evaluating dental public health programs, quality assurance, budgeting, legislative issues and environmental hazards in the dental office.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DPHS 8003. Epidemiology and Prevention of Oral Diseases. 3 Credit Hours.**

This is a comprehensive course in the philosophy, principles, and methods of study in the epidemiology and prevention of oral diseases and their interrelationships between oral and systemic health. Topics related to the epidemiology of oral diseases include measurement techniques, casualty, risk factor identification, study designs, sampling concepts, and the distribution of oral diseases and conditions in populations. The scientific basis for procedures and programs to prevent oral diseases is also examined, with emphasis on public health applications. Topics related to the prevention of oral diseases include water fluoridation, other fluoride programs, pit-and-fissure sealants, diet, nutrition, oral hygiene, chemotherapeutics, and screening programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DPHS 8004. The Role of Behavioral Science in Dental Public Health. 1 Credit Hour.**

This is a seminar course on the principles and methods of study in behavioral sciences and the application to dental public health. Topics will include behavioral science research methods, basic principles of human behavior, behavioral science strategies and interventions aimed at promoting oral health. Motivational interviewing as an intervention to promote oral health will be reviewed. The topics will be presented with an emphasis on public health applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DPHS 8005. Provision and Financing of Dental Public Health. 2 Credit Hours.**

This course will cover topics such as: Overview of fee-for-service private practice and salaried practice, detailed examination of traditional insurance in general health and dental plans, managed care in general and dental plans, HMOs, Medicaid, evolution of current plans and some projections into the future developments, types of dental personnel and social, economic, and political factors determining their supply and deployment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**DPHS 8007. Analysis of Oral Dental Health Data. 1 Credit Hour.**

The overall goal of this course is to provide students with a practical knowledge and understanding of the design and conduct of oral epidemiological research projects, data analysis, interpretation, and reporting of the results. The students will apply the knowledge learned from foundation courses to define research questions and hypotheses, select study design, develop or select measurement tools, collect and manage data, conduct statistical analysis, and report the findings. The course will focus on analysis of oral health related measurements and the statistical analysis of dental data which are usually clustered because of the presence of multiple sites within a mouth. Analysis of complex health data (e.g., multiple and correlated data such as dental caries) and data from complex sample design will also be discussed. Ethical conduct of research will be reviewed and discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may be repeated for a total of 2 credit.

**DPHS 8009. Applied Statistical Analysis of Oral Health Data. 1 Credit Hour.**

The overall goal of this course is to provide students with practical knowledge and understanding of dental caries data and opportunities to conduct oral epidemiological research projects using dental caries data. Students will learn about various caries measurement systems and foundational analytic skills to examine properties of data elements and develop summary measures. In particular, the course will cover essential statistical theories and analytic approaches for correlated count data (e.g., dental caries counts clustered within a mouth). Analysis of complex sample data will be also discussed in order to make inferences about a target population.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may be repeated for additional credit.

**DPHS 9991. Research in Dental Public Health. 1 to 9 Credit Hour.**

The overall goal of this course is provide students with the knowledge and understanding related to the principles and methods used in epidemiologic study of dental diseases. Philosophy of the science, study designs, strengths and limitations of different designs. IRB protocol development, consent, design, methods, conduct and analysis of a research project will be developed within this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Dentistry, Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Dermatology (DERM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**DERM M300. Dermatology Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**DERM M355. Career Exploration of Dermatology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**DERM M455. Dermatology. 0 Credit Hours.**

**Course Attributes:** M2

**DERM M456. Surgical Dermatology, Mohs Micrographic Surgery. 0 Credit Hours.**

The FCCC dermatology rotation is a surgical dermatology elective with a focus on Mohs micrographic surgery (MMS) for cutaneous malignancies. After this course, students will be able to understand the indications for MMS and other dermatologic procedures such as standard excisions, nail biopsies, intralesional triamcinolone and other intralesional treatments. They will develop an understanding of how the procedures are performed. Additionally, they will develop an understanding of the post-operative course for these procedures, and how to manage any complications that may arise.

**Repeatability:** This course may be repeated for additional credit.

## Disability Studies (DSST)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**DSST 5401. Disability Rights and Culture. 1 to 3 Credit Hour.**

This course provides a socio-historical survey of the political, economic, social and cultural relations between disabled and non-disabled society in America. Topics such as the social construction of disability and the changing experiences of persons with disabilities are discussed in the context of other civil rights movements and the broader evolution of social policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**DSST 5402. Action Modes of Research. 3 Credit Hours.**

This course explores the foundations of collaborative and action research. There will be a strong focus on the sets of beliefs that lead to and underlay action research, and how these beliefs are different from traditional paradigms. Students will also work on the practical means by which those affected by research are included in its design. Readings and discussion will focus particularly on disabilities, but will also include considerations of gender, race, class and sexual orientation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DSST 5403. Disability and Social Policy. 1 to 3 Credit Hour.**

This course examines public policy in the U.S.; particularly the influence of recent Congressional actions and judicial decisions in the areas of education, health care, human development, rehabilitation and employment of individuals with disabilities. Will examine the origins, goals and target populations for these policies and the extent to which policies are consistent with each other, and will assess the effectiveness of policies and the impact they have on people's real lives, including people with disabilities, family members and professionals. Note: Cross-listed as SOC ADMIN 0654.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**DSST 5404. Health and Wellness for Persons with Disabilities. 3 Credit Hours.**

This course is designed to introduce students to the meaning of health and wellness for individuals with disabilities. A biopsychosocial model will be used to examine the various dimensions of health. Students will examine the role(s) that theoretical understandings of health behaviors, societal values and systems, and demographic factors have in facilitating or inhibiting wellness. The course will also explore the supports people with disabilities may require in order to achieve and maintain health and wellness. Note: Cross-listed as THER REC 0521.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**DSST 5405. Disability Studies in the Humanities. 1 to 3 Credit Hour.**

Interest in Disability Studies is exploding in the humanities disciplines. The focus and content of this course will depend upon the interests of faculty and graduate students. Possibilities include: Health and Disability in American History; Disability and Performance Studies; Disability in American Literature; Imaging Bodies World Film' Cross-Cultural Disability Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DSST 5501. Introduction to Disability Studies. 1 to 3 Credit Hour.**

Only available to students who are research assistants and externs of the Institute on Disabilities. Special authorization required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DSST 9489. Field Work in Disability Studies. 1 to 3 Credit Hour.**

This course provides experiential learning in the experiences of persons with disabilities. Students are assigned to work with and be mentored by persons with disabilities and their families. Sites will be selected in collaboration with each student's development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Distributive Education (DSED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**DSED 5422. Methods of Teach Mkt Edu. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**DSED 5522. Trends in Distribution. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Early Childhood Education (ECED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ECED 5106. Early Literacy and Language Development: Birth-Kindergarten. 3 Credit Hours.**

The aim of this course is to provide students with foundational knowledge about the development of early language and literacy skills, their role in later reading and academic success, and the instructional practices that best support them. Students will develop essential practices for building early language and literacy competence in diverse classroom settings. This course includes 20 hours of stages 1, 2, and 3 field experience competencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECED 5107. Mathematics Education for the Early Years: PreK-4. 3 Credit Hours.**

The aim of this course is to provide preservice teachers (PTs) with essential mathematical knowledge for teaching early mathematics based on an integration of research and practice. In particular, PTs will obtain deep content understanding of the key mathematical topics, relevant knowledge of children's mathematical thinking, and pedagogical design ability such as task analysis and lesson planning. In addition, PTs will develop critical thinking skills that allow them to critically analyze the existing learning environment (e.g., textbooks and instruction) and essential practices for building early mathematics competence in diverse classroom settings. This course includes 20 hours of stages 1, 2, and 3 field experience competencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECED 5108. Social Studies Education for the Early Years: PreK-4. 3 Credit Hours.**

The focus of this course is the development of social skills in young children and how they lay a critical foundation for citizenship in an evolving democracy. The course will include theories of social education and the developmental learning processes of civics, economics, history, and geography in young children in K-4 educational settings. Diversity and culture are central aspects of the course as they relate to ways that children, families, schools, communities and teachers view and interact in shared communities of learning. This course includes 20 hours of stages 1, 2, and 3 field experiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECED 5109. Science Education for the Early Years: PreK to 4. 3 Credit Hours.**

This course will draw on science practices, instructional technology (e.g., video vignettes of classroom activities and science websites), and collaborative lab-based activities to explore current issues of teaching and learning science in the pre-K and early elementary school classroom. This course includes 20 hours of stages 1, 2, and 3 field experience competencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECED 5206. Literacy Foundations for the Primary Grades: First through Fourth. 3 Credit Hours.**

The main focus of this course is to develop knowledge of the theories, methods, and materials that can be used to teach reading and writing concepts and skills in the elementary classroom (from late kindergarten through fourth grade). There will be an emphasis on conceptual knowledge as well as specific procedural knowledge needed to implement effective, research-based practices. Furthermore, policy issues affecting literacy instruction and practices will also be addressed. This course includes 20 hours of stages 1, 2, and 3 field experience competencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECED 5370. Sem Early Child Lit Edu. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECED 5502. Cognitive Development. 3 Credit Hours.**

Understanding how people learn is a critical part of understanding how best to teach. This course will address theories of cognition and learning and provide practice in weaving key ideas into the design, implementation, and assessment of classroom instruction. This class is not a methods class; rather, it provides the conceptual basis of teaching approaches that explains why some approaches work better than others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Earth and Environmental Science (EES)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**EES 5011. Remote Sensing and GIS. 4 Credit Hours.**

The focus of this class is on remote sensing technologies and geographic information systems. Remote sensing is a dynamic field; new, high-resolution satellites are coming on line almost daily, and there has been an exponential growth in applications of remote sensing data during the past decade, including: mineral exploration, precision agriculture, watershed management, land use classification, military intelligence, and climate monitoring. By the end of the semester you will have a fundamental understanding of the uses and limitations of remote sensing data for environmental applications, and a thorough familiarity with geographic information systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**EES 5015. Drone Shortcourse. 1 Credit Hour.**

Drones are everywhere. This course offers a short introduction to use of drones, otherwise known as unmanned aerial vehicles (UAVs). Students will be taught use of drones in research and other societal applications, basics of flight and operation of drones, and regulations applicable to drone usage. This course does not provide certification to become a drone pilot, but the steps to certification will be reviewed. Flying experience will be provided through labs conducted at the Ambler campus. Students will complete a project involving video or photography using a drone. This course is typically offered in Spring Semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**EES 5042. Coastal Processes. 4 Credit Hours.**

The course will apply a process geomorphological approach to understanding coastal behavior, including global distribution of coasts, wave and tidal hydrodynamics, nearshore and aeolian sediment transport, and morphological signatures of extreme events.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**EES 5101. Structural Geology (Graduate). 4 Credit Hours.**

The purpose of this course is to train students in the concepts and techniques of structural geology. Students will learn how to collect, analyze, and interpret geologic data drawn from a variety of disciplines pertinent to structural geology and present a cohesive analysis and interpretation of these results. Results are presented as maps, reports, and computer models. A hypothesis driven term project will be conducted by the graduate student on a topic in structural geology. NOTE: This course differs from the undergraduate version EES 4101 through graduate specific laboratory and exam questions, readings, and the term project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5401. Analytical Methods in Mineralogy. 4 Credit Hours.**

An introduction to the theory and application of X-ray diffraction and spectroscopic techniques for analysis of mineralogical samples. Students will learn the theory underpinning these methods, acquire skills in instrument operation, and apply these skills to research-relevant problems such as phase identification, site occupancy, chemical analysis, and planetary surface studies. Techniques discussed include powder X-ray diffraction, visible, Raman, and infrared spectroscopy, and synchrotron-based X-ray spectroscopic and scattering techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5402. X-ray Crystallography. 4 Credit Hours.**

Generation and use of x-rays for diffraction analysis; Analysis of clays and related minerals by x-ray diffraction; Crystal structure patterns and biogeochemical groups.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5406. Nanoscience and the Environment. 4 Credit Hours.**

Nanotechnology has developed rapidly in the past decade, yet our knowledge of its environmental impact, particularly regarding the fate and behavior of nanomaterials in the environment, lags far behind. This course will cover a range of topics concerning nanomaterials in the environment, ranging from the unique size-dependent properties of nanomaterials to their applications in environmental remediation. The lab component of this course will include nanomaterial synthesis and characterization; nanomaterial transport, aggregation, deposition, transformation, and persistence in natural settings; environmental applications of nanomaterials; and nanomaterial characterization techniques, particularly electron microscopy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**EES 5434. Ecohydrology. 3 Credit Hours.**

Hydrological and ecological processes are tightly interrelated, with vegetation affecting the hydrological cycle, and hydrologic partitioning of the water budget affecting vegetation dynamics. This course builds on perspectives from ecology, hydrology, and soil science to focus on the emerging, interdisciplinary area of ecohydrology - the science that studies mutual interaction between the hydrological cycle and ecosystems. The first part of the course will deal with fundamental processes controlling the flow of water in the biosphere (in land, atmosphere, soil and plants) and the interactions with ecological processes and human dimensions at different scales. The second part will deal with the implications of ecohydrological feedbacks, covering a broad range of issues including global environmental change, land use change, global desertification/land degradation, urbanization, soil erosion, and the food-energy-water nexus. The concepts and principles discussed in the class will have broad applications ranging from finding innovative solutions to ecosystem degradation and food security, and designing global change responses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**EES 5454. Introduction to Geophysics. 4 Credit Hours.**

An introduction to gravity, magnetic, electromagnetic, and seismic exploration methods. Applications include environmental characterization, oil and mineral exploration, geotechnical engineering, and archeology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5461. Low-Temperature Geochemistry. 4 Credit Hours.**

Principles of aqueous geochemistry discussed within the framework of geologic processes. One or two field trips.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5462. Advanced Low-Temperature Geochemistry. 3 Credit Hours.**

Study and discussion of topics in aqueous and sedimentary geochemistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**EES 5502. Ice and Global Climate. 4 Credit Hours.**

We live in a time of rapid global warming and are faced with adverse effects on human society. Ice, in its various forms from snow to ice sheets, play an important role in the global climate system by, for example, modulating the solar-energy flux and global sea level. Ice also provides a unique archive of past climate history that contributed to our understanding of global warming today. This course will provide an overview of different forms of ice and their role in Earth's climate system, and foundations in physical understanding of how ice behaves at and near Earth's surface. In addition, contemporary techniques in observations of different forms of ice will be explored with examples in processing and interpretation of publicly available datasets. Prior to Fall 2023, the course title was "Glaciology."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SE, SF

**Repeatability:** This course may not be repeated for additional credits.

**EES 5506. Observing and Modeling Climate Change. 3 Credit Hours.**

There is no scientific doubt that human activity has been influencing the climate system since the industrial era due to emissions of greenhouse gases and causing a rise in global mean temperature (i.e., global warming). While Earth's climate and temperature has fluctuated naturally in the past, the rate of current warming in response to human activity is unprecedented and is having a large impact on the climate system and living organisms on our planet. We are experiencing the effects of climate change today in the form of melting of sea ice, glaciers, and ice sheets, sea level rise, increases in the intensity of heat waves, change in frequency and intensity of droughts, extreme rainfall events, and wildfires. The results of climate model simulations suggest that the effects of climate change will worsen throughout the 21st century and beyond if we continue to emit greenhouse gases. In this course we will gain a foundational understanding of anthropogenic climate change and explore the evidence directly through hands-on analysis and visualization of real-world observational datasets. After investigating observational evidence, we will build an understanding of climate models, the experiments performed including climate projections, and how to access, analyze, and visualize publicly available model output. Along the way, students will gain experience in the tools that scientists use to analyze and visualize observational datasets and climate model output. While no prior computational knowledge is assumed, students will be introduced to aspects of the Python programming language, the command line interface, and GitHub. Course content and assignments will be centered around the use of Jupyter Notebooks. This course will be hands-on and assignment and project oriented, with in-class periods geared toward learning to analyze and visualize climate datasets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5601. Vertebrate Paleontology and Taphonomy. 3 Credit Hours.**

This course examines vertebrate fossils and their importance for interpreting and reconstructing terrestrial ecosystems. Students will learn the basics of vertebrate skeletal anatomy, interpret transport and depositional histories of skeletal elements and assemblages, and combine this information with geologic data to reconstruct paleoenvironmental settings and paleocommunity associations. Several class sessions will meet off-campus at local museums; one weekend field trip is required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5625. Electron Optical Techniques. 4 Credit Hours.**

This course will introduce the microanalytical and imaging methods of electron optical instruments such as the Electron Probe Microanalyzer (EPMA) and the Scanning Electron Microscope (SEM). The theory and operation of the instruments will be covered as will the interpretation of images and analytical results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5702. Sedimentary Petrology. 4 Credit Hours.**

This course explores the basic composition and texture of sedimentary rocks in order to understand depositional environment and provenance. This course focuses on sedimentation mechanics, petrography, and diagenesis. Includes a lab.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5725. Soils and Paleosols. 4 Credit Hours.**

The course is divided into two parts: modern soils and paleosols. The goals of this course are to teach students the fundamentals of modern soil genesis and classification in order to interpret ancient soils preserved in the rock record (paleosols), and to incorporate models of soil genesis into the traditional geology paradigm. Students will be exposed to a combination of laboratory methods and field work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5801. Quantitative Structural Geo. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5802. Tectonics. 3 Credit Hours.**

Plate tectonic theory. Structure and geometry of lithospheric plates; mechanisms of divergent, transform and convergent boundaries; subduction; obduction; mantle plumes; large igneous provinces; large sedimentary basins and Phanerozoic orogenic belts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 5811. Planetary Geology. 4 Credit Hours.**

This course explores the modern and ancient geologic processes on other planets and discusses how studies of other planets can aid us in a better understanding of our Earth. The course will also cover topics such as planetary exploration and astrobiology. Includes a lab.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 8000. Geology Seminar. 1 Credit Hour.**

Required of M.A. students. Visiting specialists in a wide variety of geologic fields will lecture and discuss their research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EES 8082. Independent Study Program. 1 to 3 Credit Hour.**

Limited to Geology graduate students with permission from the department.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EES 8200. Graduate Geology Seminar. 3 to 6 Credit Hours.**

Advanced seminar course; subject matter varies from semester to semester. The educational objectives of the course are to focus on current issues at the interfaces of geological processes through advanced technological methods of analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EES 8411. Advanced Hydrogeology. 3 to 4 Credit Hours.**

This course is typically offered in Spring.

This course covers water resources with an emphasis on groundwater. Topics include quantifying groundwater flow, groundwater-surface water interactions, contaminant transport, and a brief introduction to modeling. Problem sets and labs are used to develop specific skills, including field techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 8421. Groundwater Modeling. 3 Credit Hours.**

This course offers students a chance to construct models using well known codes such as MODFLOW and other practical tools. The goals of this course are: learn tools for groundwater flow modeling, be able to recognize how to judge models and compare them with reality, and gain computer skills that can be used with a wide variety tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**EES 8701. High Temperature Reactions. 4 Credit Hours.**

Thermodynamic laws and theory are used to discuss igneous and metamorphic processes. Exact field relationships are combined with thermodynamics to solve applied petrologic problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 8706. Regional Geology. 3 Credit Hours.**

Discussion of the geologic history and tectonics of selected regions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 8711. Economics of Geo Ore Deposits. 3 Credit Hours.**

Study of the geology, origin, distribution, economics and extraction methods of major classes of ore deposits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 8911. Teaching of Geology. 0 to 1 Credit Hours.**

Required of all teaching assistants in their first semester of teaching. Instruction and evaluation of teaching laboratory, or discussion sections.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EES 9991. Master's Research Projects. 1 to 6 Credit Hour.**

Short-term, limited research project or laboratory project in the field. This course is not the capstone project course, nor can it be used for thesis based research. The course is for master's students only, including PSM, MA or MS. This class will not confer full-time program status unless nine credits are taken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Science, Prof Science Masters.

**Repeatability:** This course may be repeated for additional credit.

**EES 9993. Comprehensive Examination Prep. 1 Credit Hour.**

This 1-credit seminar is designed to prepare students for the MS Comprehensive Exam given at the end of this course, ensuring a fundamental grounding in Earth Science. Students will study material covered in the exam including hydrogeology, geophysics, sedimentology/stratigraphy, earth history, geomorphology, structural geology, GIS, geochemistry, mineralogy and petrology. MS students will take this course in the Spring semester of their first year.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EES 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is required for students who are preparing for the preliminary or candidacy examination. Students should enroll after coursework is completed or when preparing for the candidacy exam until the time that the preliminary or candidacy examination is completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. All students must complete a minimum of one credit of this course. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may be repeated for additional credit.

**EES 9995. Capstone Project. 1 to 6 Credit Hour.**

Capstone project for master's students including students in PSM, MA or MS. This class will provide full-time status. Students in PSM programs need to register for at least one credit of this course to fulfill program requirements. Additional credits may be required for specific programs. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Science, Prof Science Masters.

**Repeatability:** This course may be repeated for additional credit.

**EES 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

Course for master's thesis research. Only intended for students in thesis bearing master's programs. A minimum of one credit is required. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EES 9998. Pre-Dissertation Research / Elevation to Candidacy. 1 to 6 Credit Hour.**

This course is intended for students who are performing research prior to candidacy. Students can register for this course after required courses are completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must be registered for this course during the semester that they are to be elevated to candidacy examination. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may be repeated for additional credit.

**EES 9999. Dissertation Research. 1 to 6 Credit Hour.**

The course is for Ph.D. students who have been elevated to candidacy. During the course of their candidacy students must complete a minimum of two credits of dissertation research. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Economics (ECON)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ECON 5001. Managerial Economics. 3 Credit Hours.**

This course examines the applications of economic theory to problems confronting managers, including pricing under different market structures, cost and technology, strategic decision making, theory of demand, and the economics of less than perfect information.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 5011. Quantitative Methods in Economics. 3 Credit Hours.**

This course provides students with the mathematical and statistical tools they will need to succeed in the M.A. in Business Economics. The course provides a hands-on introduction to the calculus of one and several variables and shows how calculus helps answer economic questions. It then introduces students to basic tools of statistical analysis in economics and the use of the R statistical package. It pays particular attention to hypothesis testing and basic regression techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 5102. Economic Decisions and Public Policy. 3 Credit Hours.**

The purpose of this course is to give Master of Public Policy students a working understanding of basic economic theory and how it applies to public policy analysis and decision making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 5112. Public Finance. 3 Credit Hours.**

This course covers theory and evidence on the economics of the public sector. Topics include public goods, externalities, optimal tax theory, and the effect of taxation on economic decision making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 5113. Data Analytics for Economists. 3 Credit Hours.**

This course builds upon basic econometric theory by emphasizing computational skills, especially the use of programs such as R, to manipulate and analyze real-world data sets. The course pays particular attention to the use of large data sets and imperfect data sets that require "cleaning." In addition to data analysis, the course emphasizes data visualization techniques and machine learning to illustrate and investigate economic problems. Students should have previous course in econometrics prior to enrolling in this class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5011.

**ECON 5182. Independent Study. 1 to 6 Credit Hour.**

Supervised individual reading and research projects for master's and Ph.D. students. Depending on the type of project, work experience or curricular practical training may be required. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECON 5190. Special Topics in Economics. 3 Credit Hours.**

A one-semester course on a topic in a particular field of economics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECON 5201. Microeconomic Theory. 3 Credit Hours.**

This course provides a mathematical view of microeconomic theory and applications. The analysis makes frequent use of calculus and other mathematical tools. Topics include consumer behavior, production, costs, perfect competition, imperfect competition, factor markets, public goods, and market failure.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5011.

**ECON 5202. Macroeconomic Theory with Calculus. 3 Credit Hours.**

This course provides a mathematical view of macroeconomic theory and applications. The analysis makes frequent use of calculus and other mathematical tools. Topics include consumer behavior, production, costs, perfect competition, imperfect competition, factor markets, public goods, and market failure.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5011.

**ECON 5203. Introduction to Econometrics. 3 Credit Hours.**

An introduction to econometric theory. This course covers regression analysis, hypothesis testing, panel data, limited dependent variable models, instrumental variables, causal effects, and derives the properties of each of these estimators in substantial detail. This course is designed for students who enter the M.A. in Business Economics who have not taken an undergraduate course in econometrics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5011.

**ECON 5501. Survey of Internatl Econ. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 5538. Economic Operations and Strategy. 3 Credit Hours.**

This course builds on Economics 5201 by examining firm behavior and strategy in detail. Students study the actions of firms in perfectly competitive and imperfectly competitive settings. It pays particular attention to strategic behavior both internally, such as through the design of incentive mechanisms and externally, such as the response the threat of entry by competing firms. This course is required for students who plan to take the exam to become a Certified Business Economist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5201.

**ECON 5545. Economics of Labor Markets. 3 Credit Hours.**

This course applies economic theory to the analysis of labor markets. The course covers a variety of topics, including labor supply and labor demand, human capital, the impact of different compensation mechanisms, and macroeconomic labor policy. The course makes ample use of current econometric techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5201.

**ECON 5551. Urban Economics. 3 Credit Hours.**

This course uses economic theory and econometric techniques to study cities and regions and their relationships with each other. The course will shed light on questions like: Why are buildings usually tallest at the city center? Why are most jewelry stores located at the vicinity of 9th and Sansom, rather than spread across the city like grocery stores or movie theaters? Why are some cities very dense while others are spread out?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5201.

**ECON 5557. Health Economics. 3 Credit Hours.**

This course uses economic theory and econometric techniques to analyze both the marketplace for health care and the implications of health policy. It also analyzes the socioeconomic implications of current health crises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5201.

**ECON 5801. The Economic Environment. 3 Credit Hours.**

The student's proficiency and confidence in solving real-world business problems increase as a deeper understanding of micro- and macroeconomic issues is developed. This course examines foundations of the economic behavior of enterprises and consumers in different market environments, such as open market, monopoly, and oligopoly. Also analyzed is the impact of government fiscal, monetary, and trade policies on business decisions and on economic measures such as GNP, employment, interest rates, and exchange rates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**ECON 5901. Masters Writing Seminar. 3 Credit Hours.**

This course provides a summative experience in the Business Economics MA. Students demonstrate their mastery of the material they have learned in the program by performing original economic analysis of a current business or public policy problem. They also formally present their findings to the class and faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C+ in ECON 5201, ECON 5202, and ECON 5113.

**ECON 8001. Microeconomic Analysis. 3 Credit Hours.**

Microeconomic theory for graduate students with little preparation in economics. This course offers detailed analysis of the behavior of households and firms in a variety of market settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8002. Macroeconomic Analysis. 3 Credit Hours.**

Macroeconomic theory for graduate students with little preparation in economics. This course is a survey of theories and evidence bearing on growth and cycles in output, employment, interest rates, and prices. The course includes sector details and considers the scope for control of cycles.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8003. Mathematics for Economics I. 3 Credit Hours.**

An overview of elementary calculus, linear algebra, and the theory of Lagrange multipliers for graduate students in economics and related fields.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8005. Microeconomic Theory I. 3 Credit Hours.**

This course covers demand analysis; the theory of the firm; the theory of markets; and theories of wages, rent, interest, and profits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8001 and ECON 8003)

**ECON 8007. Macroeconomic Theory I. 3 Credit Hours.**

This course covers macroeconomic concepts relating to the determination of output, employment, and price level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8002, ECON 8003, and ECON 8001)

**ECON 8009. Econometrics I. 3 Credit Hours.**

This course is the first in a two-semester sequence. The materials begin with the classical linear regression model, including hypothesis testing. Such traditional topics as multicollinearity, heteroscedasticity, and autocorrelation are included. Problems of pooled data and simultaneous equations are also considered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8104. Labor Economics. 3 Credit Hours.**

This course provides a theoretical framework for analyzing the operation of the labor market. The role of the labor market in the determination of employment, wages, prices, and production is central to this analysis. Labor supply, labor demand, human capital, labor unions, migration, and discrimination are among the topics discussed. Particular attention is paid to the role of public policy and to the design of theoretical and empirical models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 5001.

**ECON 8105. Regulations and Antitrust Policy. 3 Credit Hours.**

The focus is on analysis of the impact of regulatory processes, including antitrust, upon industry. Special emphasis is given to public policy toward monopoly, resource utilization, and pricing processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 5001.

**ECON 8106. Microeconomic Theory II. 3 Credit Hours.**

Topics covered include general equilibrium analysis, game theory, introduction to public choice and welfare economics, and imperfect information analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8005 and ECON 9101)

**ECON 8108. Macroeconomic Theory II. 3 Credit Hours.**

This course presents advanced topics in macroeconomics and empirical testing of national income components, mainly in a dynamic setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8007, ECON 8009, and ECON 9101)

**ECON 8109. Theory of Economic Development. 3 Credit Hours.**

The major part is an introduction to applied theory of economic growth. The roles of human capital, investment, and natural resources are analyzed. Issues of sectoral development, policies of the public sector, finance, and international trade are discussed. Practical projections of economic growth and ease studies are stressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8009 and ECON 8007)

**ECON 8114. Advanced Labor Economics. 3 Credit Hours.**

This course examines the microeconomic foundations of macroeconomic phenomena in the labor market. Questions surrounding the nature of employment and its causes are explored. This course includes economic models of unions, contracting and agency models, efficiency wages, insider/outsider models, implicit contracts, and job searches. Specific articles in these areas form the basis of the material covered. Particular attention is paid to the mathematics behind many of the theoretical models covered in the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8005, ECON 8009, and ECON 8104)

**ECON 8115. Theory of Industrial Organizations. 3 Credit Hours.**

The course offers a microeconomic analysis of the relationship between the structure of industry markets and the conduct and performance of business enterprise. Emphasis is on the modern theory of oligopoly, including dynamic pricing, contestable markets, and game theory. Specific dimensions of firm conduct include pricing, product differentiation, mergers, and research and development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 8005.

**ECON 8116. Mathematical Economics. 3 Credit Hours.**

This course covers mathematical techniques and theorems of current importance in economic theory, with applications. Topics include game theory, social choice, general equilibrium analysis, and dynamic economics. The course concentrates on one of these topics, as warranted by developments in contemporary economic theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8005, ECON 8007, and ECON 9101)

**ECON 8119. Econometrics II. 3 Credit Hours.**

This is the second in a two-semester sequence of courses. The topics include nonlinear regression, the analysis of economic time series, and models with discrete or limited dependent variables.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 8009.

**ECON 8121. Development of Less Developed Economies. 3 Credit Hours.**

Examination of development efforts of less developed economies is undertaken. Selected domestic and international issues, policies, institutions, and reform are targeted.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8122. Economics of the Public Sector. 3 Credit Hours.**

Analysis of the economics of the public sector is covered. Topics include theories of public goods and optimal taxation, revenues, public expenditures, and incidence problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8123. Economics of Sports. 3 Credit Hours.**

This course covers the application to professional and amateur sports of theory of industrial organization; anti-trust issues; public finance involving the relationship between cities and franchises; and labor issues of reward systems, unions, and discrimination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8009 and ECON 8114)

**ECON 8124. International Trade: Theory and Policy. 3 Credit Hours.**

This course offers an intensive study of pure theory of international trade, welfare impacts of international trade, the theory and practice of commercial policy, and international factor movements. Special topics include the transfer problem; trade under uncertainty; and the relations between trade, growth, and development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ECON 8009, ECON 8106, and ECON 9101)

**ECON 8125. Theory of Public Finance. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8129. Time Series Econometrics. 3 Credit Hours.**

This course is designed to teach students advanced econometric techniques necessary to conduct original empirical research in macroeconomics. The course focuses on techniques appropriate for the analysis of time-series data. Students will learn the theoretical underpinnings of such topics as stationarity, ARMA processes, and vector autoregression (VAR) models and how to apply this theory to economic data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 8009 and ECON 8119.

**ECON 8134. Intern Monetary Econ. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 8139. Panel Data Econometrics. 3 Credit Hours.**

This course is designed to teach students advanced econometric techniques necessary to conduct original empirical research using micro-level data. The course focuses on techniques appropriate for the analysis of cross-section and panel data. Students will learn the theoretical underpinnings of such topics as instrumental variables, selection bias, and regression discontinuity, and quantile regression. We will pay particular attention to how to apply these techniques to economic data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 8009 and ECON 8119.

**ECON 8149. Computational Methods in Economics. 3 Credit Hours.**

This course is designed to teach you a broad set of methods commonly used in economics research. Because of advances in computing power and the availability of large data sets, knowledge of numerical methods is a required element of your toolkit as an economist, irrespective of your area of research. At the end of the course you should be able to solve otherwise intractable problems in economics using the methods taught in this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECON 8005 and ECON 8119.

**ECON 8159. Econometric Estimation of Structural Models. 3 Credit Hours.**

Students estimate econometric models, combining economic theory and econometric methods. The models apply to a variety of areas in economics, such as labor economics, IO, financial economics, and macroeconomics. By the end of the semester, students will be able to write down a dynamic economic model and estimate it using such methods as maximum likelihood and simulation method of moments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECON 8005 and ECON 8119.

**ECON 8190. Special Topics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECON 8204. Health Economics. 3 Credit Hours.**

This course is designed to teach students advanced econometric techniques necessary to conduct original empirical research using micro-level data. The course focuses on techniques appropriate for the analysis of cross-section and panel data. Students will learn the theoretical underpinnings of such topics as instrumental variables, selection bias, and regression discontinuity, and quantile regression. We will pay particular attention to how to apply these techniques to economic data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 8009 and ECON 8119.

**ECON 9001. Foundations in Managerial Economics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECON 9101. Mathematics for Economists II. 3 Credit Hours.**

Mathematical techniques and theorems are presented and used in economic applications. Proofs are presented in formal mathematical language to introduce the students to the vernacular of current economics research papers. Topics covered include advanced topics in linear algebra; the implicit function theorem in multivariate calculus and its application to comparative statistics; the Karush-Kuhn-Tucker theorem and applications to linear and nonlinear optimization theory; and differential and difference equations with elements of stability analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECON 8003.

**ECON 9183. Directed Study. 1 to 6 Credit Hour.**

This course is designed for doctoral students who need specialization in topics related to their dissertation work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECON 9994. Field Examination/Dissertation Proposal Research. 1 to 6 Credit Hour.**

This course is designed for students who have finished required coursework and are preparing a master's thesis or for preliminary and qualifying examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECON 9996. Master of Arts Thesis. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECON 9998. Dissertation Proposal Research. 1 to 6 Credit Hour.**

This course is designed for students who have passed the theory preliminary and qualifying examinations but do not have an accepted proposal. The course may be taken for up to 3 semester hours.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECON 9999. Doctoral Thesis Research. 1 to 6 Credit Hour.**

This course is designed for students who have an accepted proposal and are in the research/writing stage of the thesis. Students living in the Philadelphia metropolitan area are required to attend the seminar and fulfill its requirements. Those living outside the area are required to fulfill its written requirements each semester and to make at least one presentation of their doctoral research in the seminar or elsewhere during the period they are working on their dissertation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Education (EDUC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **EDUC 5010. Special Topics in Education. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

### **EDUC 5011. Entrepreneur Thinking-Ed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **EDUC 5101. Critical Understanding of Social Science Research. 3 Credit Hours.**

This is an introductory course in understanding research for graduate students who will primarily be consumers of research, such as Masters and Specialist students. It will also serve as an introduction to research for doctoral students in applied fields (EdD and PsyD), who may go on to do applied research and take other research courses such as Program Evaluation or Single-Subject Research. It introduces students to the principles of social scientific research and the components of the research process. We also discuss the ethical issues inherent within any research involving human subjects. Conceptual, procedural, and analysis issues from quantitative, qualitative, and mixed methods research traditions will be covered, ranging from clinical trials and experimental designs to ethnographies in real-life settings. Because the scope of the course is quite broad, it will not be possible to cover all of the details of every design and method used in educational research. Nevertheless, by the end of the course you should be aware of a range of procedures that may be applied to different types of educational studies. You will also be aware of the guidelines that should be used in selecting a set of appropriate research methods and in evaluating research. You will also learn about the role of theory in educational research and how theoretical and conceptual frameworks inform research questions and the choice of data and methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **EDUC 5115. The Context of Education. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **EDUC 5203. Effective Teaching: Theory and Practice. 3 Credit Hours.**

Provides theoretical and research basis for effective teaching strategies and affords the opportunity to practice the skills in simulated classroom conditions. Emphasizes the mastery of each skill. Exposure to a variety of teaching procedures and to a choice of the most appropriate strategy in a given educational situation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **EDUC 5204. Literacy N-6. 3 Credit Hours.**

Examines theoretical models in reading and language arts and their applications to early childhood/elementary and classroom practices, K-6. Provides opportunities for students to focus on developmental and application issues in literacy learning, the integration of reading and language arts, and alternative assessment techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **EDUC 5205. Numeracy N-12. 3 Credit Hours.**

A study of how numeric concepts and computational logic contribute to science, social studies, English language arts, and other subject areas. Students in various disciplines learn how to apply these concepts and logic to their own classrooms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5207. Early Childhood/Elementary Environments and Learning. 3 Credit Hours.**

Guides students as prospective early childhood/elementary teachers in establishing and maintaining learning environments for children. Research based principles for effective teaching and developmentally appropriate curriculum practices are presented and supported with authentic classroom based examples. Helps students utilize proven systematic approaches that will enable them to organize, conduct, and evaluate instructional practices in preschool and elementary settings. Guided by two beliefs: (1) that students need to engage actively with the concepts presented in the course outline, and (2) that students should be exposed first hand to the realities of teaching in urban settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5211. Creating a High School Learning Community. 3 Credit Hours.**

Utilizes the natural and social sciences jointly as the vehicle to exemplify to the student (1) the processes associated with stimulating the learners' integration of thinking skills toward higher order problem resolution, and (2) the strategies aimed at socialization of the learners into a learning community

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5212. Curriculum, Instruction, and Technology in Education. 3 Credit Hours.**

This 3 semester hour graduate course provides an introduction to the concepts, theories, and practices that address the linkages between the curriculum, instruction and technology. In particular, this course focuses on the implementation, management, and administration of technology infrastructure (hardware and software) at the building, school, and district levels.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5215. Standards & Tchg Pract. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5221. English for Foreign Students. 3 Credit Hours.**

The focus of this course is on English skills needed for instructional purposes. The course offers students opportunities to develop communicative skills necessary for successful teaching and information about teaching in U.S. institutions of higher education (e.g., syllabi, instructional formats, and legal issues, such as sexual harassment and plagiarism). Note: This course is for ITA students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5229. Crit Thk Val Clar & Inq. 1 to 3 Credit Hour.**

This course examines the tension that exists between curriculum requirements (especially as measured by high stakes testing) and the need to teach students critical thinking and responsibility. Participants will incorporate classroom climate techniques (character education, anti-bullying programs, etc.) into their curriculum development and their instructional planning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5231. Col Studies AT2 (CSAT 2). 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5232. Col Studies AT3 (CSAT 3). 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5241. Comp Rdg Instruction. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5242. Lit for Mid Level Learnr. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5243. Col Studies AT1 (CSAT1). 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5244. Class Discourse. 3 Credit Hours.**

The purpose of this course is to provide doctoral students with the theory and framework to study classroom discourses. According to Gee (1989), discourse "integrates words, acts, values, beliefs, attitudes, and social identities as well as gestures, glances, body positions, and clothes" (p. 7). In this broad context, we will examine student discourses in reading/language arts, mathematics and science in both in school and out-of school contexts. We use vignettes from Courtney Cazden's text as a model to critique classroom discourses among teachers and students. We also examine transcribed texts to find linguistic patterns in reading, mathematics and science classrooms. Finally, we use rubrics to judge the quality of classroom discourses to illustrate content knowledge.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5254. Characteristics of Computer-Based Instruction. 3 Credit Hours.**

Application of computer technology in instructional programs. Discusses prospects and problems of the uses of computers and other technologies (e.g., interactive whiteboards) in support of direct instruction, management, and testing. Hands-on experience is included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5255. Tech in Classrooms: TPCK. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5257. Elem Sch Rdg Instr. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5258. Second Sch Read Inst. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5259. Tch Rdg & Lang to Spec. 3 Credit Hours.**

This course focuses on understanding a) reading, b) reading problems, c) assessment strategies, and d) effective, research-based, teaching practices for students with special needs. "Students with special needs" includes but is not limited to those with poor reading, writing, and speaking skills, learning disabilities, and cultural, economic, and language differences. The goal of the course is provide each student with first-hand knowledge, skills, and solutions to address children's reading problems. Questions that guide this course include: What are the causes of low language and literacy abilities among students? How do we assess students with poor reading and writing skills? What reading and language arts strategies are most effective with students with special needs? What education and psychology of reading theories inform these practices? How can we practice inclusion during reading and language art lessons? What additional services are available to support all children's success in the classroom?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5261. Beginning Rdg Instructn. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**EDUC 5262. Introduction to Qualitative Research. 3 Credit Hours.**

Several qualitative research designs will be reviewed, including discussions of phenomenology, grounded theory, interpretive paradigm, narratives, histories, and ethnography. Research strategies/methods will be critiqued, including interviewing, participant-observation, and textual/content analysis. Important concepts for this course are appropriate research questions, study design, data collection methods, data management, managing the study, data analysis, interpretation of results, and presenting the study to peers. Qualitative data analysis will be introduced, but the emphasis is on research design and data collection. Combining qualitative and quantitative data will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5272. Instl Pract Middle Class. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5275. Seminar in Supervised Teaching. 3 Credit Hours.**

Describes basic principles of human behavior in relation to managing classrooms and the teaching of academic skills. Examples of successful applications of the principles are provided. Students required to use the principles and procedures in their classrooms and to report the outcomes to the participants in the class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5287. Practicum in Teaching. 3 Credit Hours.**

Introduces students to the process of teaching children in an elementary or high school environment. Under the direction of a Temple University faculty member, the student observes elementary or high school students in a variety of situations. Classroom discussions are held in conjunction with observed events and suggestions are made as to how to deal with a variety of management and academic problems. The course is a prerequisite to ED 406 and 412, and is taken in conjunction with ED 403 at the start of the student's program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 5321. Instructional Innovation and Entrepreneurship. 3 Credit Hours.**

This course in advanced teaching methods will focus on cutting edge pedagogy and new trends in teaching and learning. The course will be inquiry-based so that teachers across grade levels and disciplines can research and report on promising new methods, including but not limited to methods that take advantage of new technologies. Each student will create a unit of instruction using innovative new pedagogy and present that unit to the class. The course will encourage and nurture innovative and entrepreneurial thinking, creating a model for teacher innovation and entrepreneurship. It will also focus on creative strategies for enabling all students to meet learning goals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5325. Introduction to Statistics and Research. 3 Credit Hours.**

An introductory course which focuses on basic research and statistical concepts. The course will cover both descriptive and inferential statistics from the perspective of an informed consumer of empirical research. There are no prerequisites for the course. The purpose of this course is to enable students to interpret and use a variety of descriptive and inferential statistical procedures that are commonly used in education and the social sciences. Topics covered in the course include an introduction to research design, sampling, descriptive statistics, t-test, Pearson correlation, univariate analysis of variance, and non-parametric statistical tests. Emphasis will be on the proper use and interpretation of these statistical procedures. The course does not emphasize the calculation of statistics, and mathematical sophistication is not assumed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5327. Teacher Leadership and the Teaching Profession: A Guide for Action. 3 Credit Hours.**

This course provides an historical perspective on the teaching profession as well as a close look at the status of teaching today, including the development of associations and teacher unions, content-based organizations of teachers like the National Council of Teachers of English, the formation of teacher networks, and national organizations like the National Board for Professional Teaching Standards. It will look at all aspects of teaching including teacher preparation, teacher professional development, teacher advocacy, and the future of the teaching profession. In this context, the course will raise questions about the role and status of teachers in contemporary American society, how teaching fares in public policy debates, and the assumptions about teaching that underlie new federal and state requirements for teacher preparation and professional development. We will examine recent proposals to assess teachers using various frameworks and to include student test scores as a measure of teacher quality and teacher success. Designed for teacher leaders, school leaders, and other education professionals, this course will place teaching and teacher quality at the center of any discussion about the goals of education, student achievement, and school success. It will focus on the conditions necessary for good teaching and learning to occur and how teachers can help to create those conditions in their own classrooms and in collaboration with their peers and administrators.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5401. Intro to Middle School. 3 Credit Hours.**

This course will introduce you to the middle school concept. Characteristics of middle schools will be discussed, including teaming, interdisciplinary units, and literacy across the content areas. Important aspects of the middle school environment, such as collaborating with specialists and creating a learning environment in the classroom, will be emphasized. Field experiences will be in the form of focused observations and interviews.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5402. Child and Adol Develop. 3 Credit Hours.**

This course will focus on issues of child and adolescent development that are relevant for educators. Development (e.g., physical, cognitive, social) and learning theories will be examined through discussions of theory and research. Particular attention will be paid to the early adolescent. Field-based experiences, in the form of focused observations and interviews, will support these discussions. Group and individual differences will be emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5403. Diverse Lrns in Class. 3 Credit Hours.**

Through this course, students will gain expertise in applying best practices to ensure access, equity, and quality education for all students. This course will introduce you to the characteristics and special needs of students having disabilities and of students who are culturally and linguistically diverse. The complex and critical issues surrounding inclusive and heterogeneous schooling will be examined along with the establishment of collaborative relationships with fellow colleagues, members of the school community and families. This course provides an overview of theory, research and practice in teaching culturally and linguistically diverse students in the middle grades. Students will learn about the socio cultural characteristics of ELLS and how the process of acquiring multiple languages and literacy skills affects students' learning of academic content. Students will be introduced to approaches for adapting science and math content for English language learners.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5406. Teach Math Middle Gr II. 3 Credit Hours.**

This course is part of a sequence of courses within the e=mc<sup>2</sup> Transition to Teaching graduate certification program. This course will be taught in the third semester for those in the mathematics track. This course will focus on geometry, measurement, and data, as appropriate for the middle grades. This continuation course will again focus on the particular mathematical and pedagogical knowledge needed for teaching, including issues of planning, instruction, and assessment. Field experience will be in the form of student teaching, and this course will allow for reflection on this experience. Support will be provided for student motivation, classroom management, and other realities of teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5407. Teach Sci Middle Gr II. 3 Credit Hours.**

This course is part of a sequence of courses within the e=mc<sup>2</sup> Transition to Teaching graduate certification program. This course will be taught in the third semester for those in the science track. This continuation course will again focus on the particular pedagogical knowledge needed for teaching including issues of planning, instruction, and assessment. Field experience will be in the form of student teaching and this course will allow for reflection this experience. Support will be provided for student motivation, classroom management, and other realities of teaching. Whereas the first methods course was focused on the big ideas in the various disciplines in science, this course will focus on the cross-cutting themes in science as identified in the National Science Education Standards: systems, order, and organization; evidence, models, and a explanation; change, constancy, and measurement; evolution and equilibrium; form and function.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5409. Research Methods and Induction Capstone. 3 Credit Hours.**

This course will provide a vehicle to synthesize learning, reflect on experiences throughout the program, and consider issues related to the first year of teaching. Special topics include behavior problems, teacher stress, first year of teaching, professional development, and action research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5488. St Tchg in Middle Grade. 3 Credit Hours.**

This field experience involves 9 weeks of full-time student teaching. Prospective teachers will be placed in a middle grades mathematics or science classroom, where they will work under the guidance of a mentor teacher. Experiences include observing, assisting, and delivering whole class instruction. NOTE: All coursework must be completed before taking this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: EDCNDCY.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 5501. Fundamental Interpersonal Techniques for Healthcare Professionals. 3 Credit Hours.**

The purpose of this course is to develop the fundamental interpersonal skills healthcare professionals will need to provide successful healthcare services to patients and their supervisees. We accomplish this through the practice and development of micro-skills in an experiential format. Students will have an opportunity to begin to develop mastery of these skills through in class role-playing, mock interviews, and videotaped interpersonal communication session role-plays.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5502. Case-Based Instruction and Learning. 3 Credit Hours.**

This 3-credit course is designed to explore and familiarize students with similarities and differences between case-based learning (or patient-based learning) and other traditional teaching and learning methods used in professional health care education. Case-based instruction and learning is grounded in constructivism where students form new meanings by interacting with prior knowledge and a case presented. Students develop critical thinking skills related to clinical practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in AOD 5403.

**EDUC 5503. Professional Issues in Healthcare Education. 1 Credit Hour.**

This 1-credit seminar is designed to explore and familiarize students with the essence of the topics to be studied through this masters program and how they relate to their individual health care fields.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5504. Professional Health Education Capstone. 3 Credit Hours.**

Supervised work experience in an applied research and evaluation capacity in healthcare settings. Analysis of the work experience in light of the skills and abilities obtained in students' prior coursework in the Professional Health Education program. Upon completion of this course, students will be able to: apply evidence-based health care principles to teaching future professionals in their field of study, apply adult learning theories in both the didactic and clinical teaching of future professionals in their field of study, develop a viable study of teaching within their field of study, conduct a capstone project and present the capstone project. Students will be assessed in each course individually, but the capstone course will be one course in which all core content will be used to implement the study designed in the practicum course. The study is expected to be a viable study of teaching and learning in their field of study. In this capstone course, students will conduct that study, write an analysis of outcomes, and present the results to all students and faculty of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in EDUC 5587.

**EDUC 5587. Professional Health Education Practicum. 3 Credit Hours.**

Students will complete a practicum within the healthcare profession one day per week. The placement of this practicum must be approved by the program before it begins. Your supervisor must be approved by your instructor and be a healthcare professional holding a doctorate and the appropriate credentialing to practice in your setting, with at least 3 years of experience in the field. You should plan to be at your site one day per week (6 to 8 hours), for a total of at least 100 hours across the entire school year. The monthly class will include group supervision and discussion of cases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5605. Models of Teaching. 3 Credit Hours.**

Models of teaching are studied to better understand their goals and strategies, and to support new teachers in developing broader perspectives regarding teaching practice and their implications for student learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5801. Residency Practicum Capstone. 1.5 Credit Hour.**

This seminar is designed to help you make connections between the practicum teaching experiences you will have this semester and what you will be learning concurrent with your university coursework. The course will help you bridge theory and practice and provide you with a framework of support and guidance as you prepare to take charge of your own classroom. It will also provide you with tools to reflect on your experience and learn from it, which will facilitate your successful entry into the teaching profession. To accomplish this, we will engage in discussions and activities that center on your core beliefs about teaching, the context for your teaching (where you teach), your pedagogical practices (how you teach), the content you teach (what you teach), and the needs of your students (whom you teach). We will also examine how theory informs classroom practice and come to understand how instructional management strategies are inherently linked to good pedagogy. We will examine and discuss how both formal and informal student assessments work as tools for reflection and improvement. This course will prepare you for making the transition from pre-service teacher to teaching professional by beginning a teaching portfolio that you will further develop the following semester as your culminating performance assessment. The portfolio review is an invaluable assessment activity intended to help you reflect and grow as a teacher as well as prepare you for conversations about your teaching and student learning as you transition to professional practice. Your portfolio will be rooted in Temple's six teaching standards, which together comprise our definition of good teaching. You will be using the standards as a means of evaluating your teaching and your students' learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5802. Residency Student Teaching Capstone. 1.5 Credit Hour.**

This capstone class is designed to help you make connections between the teaching experiences you will have this semester as residents and what you have learned in your university classes. The course will help you bridge theory and practice and provide you with a framework of support and guidance as you prepare to take charge of your own classroom. It will also provide you with tools to reflect on your experience and learn from it, which will facilitate your successful entry into the teaching profession. To accomplish this, we will engage in discussions and activities that center on your core beliefs about teaching, the context for your teaching (where you teach), your pedagogical practices (how you teach), the content you teach (what you teach), and the needs of your students (whom you teach). We will also examine how theory informs classroom practice and come to understand how instructional management strategies are inherently linked to good pedagogy. We will also examine and discuss how both formal and informal student assessments work as tools for reflection and improvement. This course will also prepare you for making the transition from pre-service teacher to teaching professional by creating a teaching portfolio and successfully passing the College's culminating performance assessment. The portfolio review is an invaluable assessment activity intended to help you reflect and grow as a teacher as well as prepare you for conversations about your teaching and student learning as you transition to professional practice. Your portfolio will be rooted in Temple's six teaching standards, which together comprise our definition of good teaching. You will be using the standards as a means of evaluating your teaching and your students' learning during the student teaching semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in EDUC 5801.

**EDUC 5887. Residency Practicum. 1 Credit Hour.**

As a teacher candidate in a Residency program, you will engage in a year-long transformative experience in your preparation as an urban middle or secondary grades teacher. The first half of this experience we will refer to as the "Residency Practicum." During the Practicum, you will begin to enact in your classroom the teaching theories, strategies, and standards you will learn in your core courses. To help you in your development as a highly-qualified educator, you will share the classroom with an experienced professional who will impart to you his or her knowledge of best practices and the wisdom acquired from years of experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 5888. Supervised Teaching. 1 to 4 Credit Hour.**

Involves full-time placement in an elementary or secondary school for the entire semester. Students with paid teaching positions may use the school site; others are placed in a school and work with a cooperating teacher. All students supervised by Temple University faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 8102. Ethnographic Research Methods. 3 Credit Hours.**

This class will use an in-depth study of ethnographic methods to develop qualitative data collection skills. Ethnography is one type of qualitative research. It uses the study of people in their natural settings to attempt to understand their social world, culture, and the meanings they make of their experiences in social contexts. According to LeCompte and Schensul, "ethnography takes the position that human behavior and the ways in which people construct and make meaning of their worlds and their lives are highly variable and locally specific...[Thus,] ethnographic researchers learn through systematic observation in the 'field,' by interviewing and carefully recording what they see, hear, and observe people doing, while also learning the meanings that people attribute to what they do and the things they make" (LeCompte and Schensul, pp. 1-2). Because ethnographic research is intensive and involves a variety of data collection techniques - observations, interviews, and document analysis - learning ethnography is a good way to explore all of these techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8103. Contemporary Trends in Educational Research. 3 Credit Hours.**

The purpose of the course is to provide a fundamental step in the development of a research orientation of educational phenomena through introducing students to the domain of educational research and to the kind of research questions asked by educational researchers when assuming disciplinary as well as interdisciplinary perspectives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8104. Epistemology and Method in Educational Research. 3 Credit Hours.**

The purpose of the course is to provide a fundamental step in the development of a research orientation of educational phenomena through introducing students to the epistemological foundations and research methods of educational research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8232. Technology, Teaching, and Learning. 3 Credit Hours.**

Focuses on educational technologies and the ability of technology to enhance both program administration and teaching and learning for youth and adults in school and non-school settings. The ethical, social, and scientific ramifications of technological developments in education and how these developments affect the teaching and learning process are discussed. Application of instructional technologies in education, business, and industry presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8251. Teacher Development: The Reflective Teacher. 3 Credit Hours.**

Designed for practitioners interested in enhancing their skills of reflection with an eye on improving classroom practice. The fundamental components of teaching and learning will provide the foci for discussion, inquiry and reflection. The course will be largely experiential, providing participant's ample opportunity to participate directly in activities designed to provoke introspection and critical analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8252. Cultural Diversity. 3 Credit Hours.**

This course rests on three premises: (1) Because differences among learners affect learning, those differences should inform teaching, (2) Master teachers make informed judgments about learners' needs and interests, and (3) Master teachers use both these judgments and student performance data to inform instruction. This course aims to encourage teachers to consider the usefulness of these three premises for improving student performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8253. Accom Tchr: Nbpts Process. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8271. Program Planning and Evaluation. 3 Credit Hours.**

Program planning and evaluation are viewed and discussed from a lifespan perspective that incorporates program planning and evaluation for school, post-secondary and higher education, continuing education, community-based, and training and development settings. Students are encouraged to apply program planning content and processes in real educational settings, which may be school or community based.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8272. Adv Classroom Mgt. 3 Credit Hours.**

Students will study many of the teacher-controlled environmental variables which influence learning in the classroom. Particular emphasis will be placed on discovering and assessing practical and theoretical instructional strategies related to behavior management, classroom organization, differentiated and adapted teaching techniques, lesson design, motivation, and assessment. Techniques used will include teacher presentations, discovery learning, panel discussions, cooperative learning structures, group and individual projects. Assessment will be based on course participation and a summative portfolio.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8273. Adv Coop Learning. 3 Credit Hours.**

Through readings, lectures, class discussion and instructor-led activities, students enrolled in this course will be able to (1) describe research-based outcomes achievable through cooperative learning and (2) design and implement a number of practical, cooperative learning models for achieving specific learning objectives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8274. Currt Issu/Curr & Instruc. 2 to 3 Credit Hours.**

This course invites students to thoughtfully review what is currently considered best instructional practices. Special emphasis will be given to the organization, management, and evaluation of instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8275. Research Design in CITE. 3 Credit Hours.**

Students are provided with practical experience in formulating research problems and designing appropriate methods to address those problems within a lifelong perspective of education and learning. An overview of various research designs, including both qualitative and quantitative designs are conducted. Students are expected to learn how to design research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8276. International Ed Seminar. 1 to 9 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8278. Found Theor Res Reading. 3 Credit Hours.**

This course will examine influential theories and research that address the psychological, cognitive, sociocultural, literary and linguistic foundations of reading. During the first part of the course we will consider how leading and often competing reading theories developed over time as well as how seminal research studies were conducted and considered by scholars, practitioners and policy makers. From there we will then focus on research propelling current conversations in the literacy field in

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8279. Found Theor Res Writing. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8289. Capstone Seminar Cur Iss. 3 Credit Hours.**

This course, taken near the end of the program, will focus on current educational issues and the research surrounding them. In addition, it will include an experiential activity that will form a bridge between the student's career and the coursework of this program, especially the student's specialization or focus.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8401. Philosophical Foundations of Educational Research. 3 Credit Hours.**

This course asks students to grapple with a questions that will be foundational to their development as scholars in the field of education. At the most basic level, the course asks, "Why do we conduct research in education?" To help students answer these questions, the course surveys the broad variety of philosophical and scholarly traditions underlying educational research. Each of these traditions makes fundamental assumptions about the nature of knowledge and knowing, the role of education in society and human life, and the purposes and consequences of educational research. Throughout the course, students will explore these fundamental assumptions and determine their connection to various research agendas in education. In addition, students will grapple with their own reasons for conducting educational research, the impact they hope to have, and the connections between these and the College's commitment to equity and social justice. We will give special consideration to the philosophical assumptions inherent within various disciplines and debate the merits of each for conducting well-designed investigations that have the potential to improve the lives of others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8402. Policy Analysis. 3 Credit Hours.**

Should we get rid of neighborhood schools and allow a system of full choice? Should higher education be free for all students? Should the government expand access to subsidized housing? These are but a small set of the complex and important questions facing government today. This course is designed to help you learn how to identify underlying causes and explore potential solutions to problems facing public schools, institutes of higher education, and other complex organizations. Using the tools of policy analysis, our focus will be on understanding the problems these policies are trying to solve, the success of existing policies, and the potential alternative policies that might be available to solve them. Throughout the semester you will learn to evaluate the evidence for and against various policies and develop concise reports of your findings and recommendations. While it is impossible to provide an in-depth analysis of such a broad topic as "policy", we will cover many of the major current initiatives including market-based reforms of K-12 education. While the content for the first four sessions is set, specific topics for the remaining sessions will be determined at the beginning of the semester to reflect the interests of enrolled students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8403. Understanding Social Science. 3 Credit Hours.**

The purpose of the course is to provide a foundation in the core ideas of social science research of a research orientation through introducing students to epistemological foundations and research methods in educational research. More specifically, we will be working together to promote the following major goals: Understand and grapple with the types of questions that are addressed by social science researchers, particularly in the field of education; Review the major concepts, theoretical perspectives, and practical lenses of sociology and their application in an educational context; Explore relationships among the questions social science researchers ask, the methods they employ, the epistemologies they invoke, and the conclusions they draw; Collaborate with students from other concentrations to understand how different questions, methodologies, and epistemologies play out in different fields of study; Consider our own questions, interests, methodological preferences, and epistemological beliefs and the implications of these assumptions for our emerging research questions and design choices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8404. Quantitative Analysis, Part I. 3 Credit Hours.**

Student attitudes toward statistics run the gamut from extreme interest to apathy to dread. You will learn in this course that it is possible to improve your thinking and make better decisions when you are facile in some fundamental statistical concepts and skills. When you "mathematize" your professional and personal world, you can reduce uncertainty, make better predictions, and understand the difference between (a) real and illusory differences among people and (b) real and illusory correlations (e.g., gender and depression; gender and risk-taking). This is true regardless of whether you are training to be a researcher, training to be a counselor, and learning stats for a variety of other fields. All methods for improving the lives of children and adults rely on research; major organizations (e.g., AERA, APA, ACA, AMA, etc.) emphasize evidence-based decision-making or choosing techniques that have been shown to be effective. Understanding statistics is a key component of evidence-based decision-making. One reason people hate or fear statistics is that their prior mathematics instructors were so bad that they became turned off to any kind of math or even doubted their math ability. Another reason is that some stats professors think that the mathematical (computational) aspect of stats is the only and most important thing rather than viewing computations as a means to an end, and aid in making decisions or drawing conclusions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**EDUC 8405. Quantitative Analysis, Part II. 3 Credit Hours.**

The world is a complex place, particularly in the arena of education. Rarely are phenomena related to developing, learning, teaching, remembering, or forgetting rooted in a single source or explained by a lone cause. This course is designed to train future educational researchers to untangle these complex, multifaceted interconnections between predictor(s) and outcome(s) through multivariate statistics. The emphasis for this course is on understanding and using educational statistics, not on memorization. Particular attention is dedicated to mastering when and why particular techniques would be useful, and what specific windows into reality they offer relative to other analytic strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8501. Motivation in Education. 3 Credit Hours.**

The purpose of the course is to provide students the opportunity to develop deep, critical, and personally relevant understanding of theoretical concepts and processes, methodological considerations, and practical implications of contemporary motivation theories as they are applied in educational settings. Particularly, the course aims to help students develop knowledge and skills that would allow the critical and constructive application of motivational theory to designing investigations of educational phenomena of interest.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8502. Social Contexts of Learning. 3 Credit Hours.**

This three-credit hour course examines research from both social cognitive and sociocultural perspectives on learning in education in classrooms, schools, and informal contexts. We will investigate research on students' everyday practices and its connection to learning various subjects in schools; the relationships between culture, language, teaching and learning; and issues of race, social class, ability, and gender in education. Finally, we will examine how national, state, and local policies influence the social contexts of teaching and learning, with particular attention placed on issues of equity and access in classrooms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8503. Learning to Read. 3 Credit Hours.**

The purpose of this course is to provide students with the opportunity to learn about the most current research and practices of how children learn to read. We will discuss the importance of early language and literacy experiences and discuss techniques used to teach phonics and reading comprehension. Each topic will focus on an issue in learning to read and how it impacts special populations and English Learners (ELs). The course will take a developmental approach and discuss how foundational skills begin from birth and are developed through four grade. The class will discuss how foundational language and emergent literacy skills impact learning to read. We will then discuss how beginning readers and writers need to develop an understanding of the alphabetic principle (in order to decode words) and begin to use their knowledge of how letters represent sounds and how those letters and sounds make up words. We will also learn how children transition from learning to read to reading to learn as children begin to develop comprehension strategies. In each class, we will discuss how each topic relates to children who are having difficulty learning and children who are English Learners.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8504. Problem Solving and Reasoning in STEM Education. 3 Credit Hours.**

This course will introduce you to a subset of major research lines in reasoning and problem solving, with specific contexts in science, technology, engineering and mathematics (STEM) education. We will use research literature to explore conceptualizations of rationality and critical thinking, how students use these skills to understanding mathematics and science, and how educators teacher use these skills in mathematics and science classrooms, as well as teaching these skills to students. In addition to these topics, this course will continue building and developing the skills that doctoral students will need in order to be successful in their graduate programs and in their professional lives. In particular, this course will focus on developing skills related to analyzing, synthesizing, and reviewing educational research literature, and to write a research proposal relevant to reasoning and problem solving in STEM Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8505. Assessment and Evaluation of Students. 3 Credit Hours.**

This course is designed to provide students an opportunity to examine the literature related to major issues in the assessment of students with learning problems, including students with disabilities (SWD) and English Language Learners (ELL). It is assumed that students enrolling in this seminar will bring an understanding of psychometrics and knowledge of the methods used to assess these populations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8506. Cognition and Learning in Education. 3 Credit Hours.**

This course is designed to stimulate graduate students' thinking about how learning occurs in a variety of domains, and what aspects of cognition influence the ability to learn in those domains. We will read and discuss relevant review chapters and empirical articles and share findings from related articles of interest from fields such as cognitive and developmental psychology, education, and the learning sciences. Focal questions for the course include: What are the current cognitive perspectives on how learning occurs in a variety of academic domains? How might this knowledge impact instructional design in those domains? How can we study and assess learning in different settings? We will think about and discuss learning across a wide range of age groups (from early childhood through adult years), individual differences (e.g., native language, special education status), academic domains (e.g., reading, mathematics, etc.), and learning environments (e.g., classroom, out-of-school, informal learning, computer-based learning environments).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8545. Social Cntxt Math Sci Ed. 3 Credit Hours.**

This course examines research from a socio-cultural perspective on mathematics and science education. We will investigate research on students' everyday mathematics and science and its relationship to learning these subjects in schools; the relationship between culture, language, and mathematics teaching and learning; and issues of race, social class, and gender in mathematics and science education. Finally, we will examine how national, state, and local policies influence mathematics and science teaching and learning, with particular attention placed on issues of equity and access.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8727. Foundations Math Sci Ed. 3 Credit Hours.**

This course will introduce students to the foundations of math and science education. It will examine trends in the history of math and science education, consider major philosophical arguments about learning math and science, and analyze the portrayal of math and science in the K-12 classroom. Simultaneously, we will focus on what it means to do math and science and on understanding the practices and habits of minds of mathematicians and scientists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 8730. Res Topics Sci Ed. 3 Credit Hours.**

This doctoral level course will explore current research in science education. Key questions will be explored and current literature on that topic will be read and critiqued. Faculty in the program area will alternate teaching this course and the topics will vary from year to year. As a result, this course can be taken up to 3 times. Topics that this course will explore are demonstrations in the classroom, scientific inquiry, professional development, classroom-based research, technology in the science classroom among other topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 8731. Psych of Learning Math. 3 Credit Hours.**

This doctoral seminar will focus on psychological theory and research relating to the learning and teaching of mathematics. The main emphasis will be on developing solid conceptions of what it means to know and understand mathematics from a psychological perspective.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 9185. Applied Research and Evaluation Internship. 3 Credit Hours.**

Supervised work experience in an applied research and evaluation capacity in schools, business, government, or private agency. Analysis of the work experience in light of the skills and abilities obtained in student's prior coursework in AOD.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9255. Research Seminar in Science, Mathematics, and Educational Technology. 3 Credit Hours.**

This course will introduce you to a subset of major research lines emerging in the fields of mathematics and science education as well as educational technology. We will examine the research literature to understand some of the "hot topics" currently in debate in the fields of mathematics, education and educational technology research. Although the course will be focused around topics that intersect three fields, readings will help us understand how these topics are being conceptualized in the individual areas of mathematics education, science education and educational technology. In addition to these topics, this course will continue building and developing the skills that doctoral students will need in order to be successful in their graduate programs and in their professional lives. In particular, this course will focus on developing skills related to writing a literature review or research proposal. This paper could facilitate exploration of research questions that interest you and/or build a foundation for your dissertation study. This course will be guided by questions such as: What do we know? How do we know it? What don't we know? How do scholars build on previous work in the field? How do scholars critique previous work in the field? What methods are they using to collect and analyze their data?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDUC 9257. Problems in Education. 1 to 6 Credit Hour.**

Limited to matriculated doctoral students and those with permission of instructor. Specified problems, research, and practice in education. May be repeated for credit when approved by the instructor. Specific offering changes from semester to semester; contact advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9282. Graduate Independent Study in Curriculum, Instruction, and Technology. 1 to 6 Credit Hour.**

Limited to matriculated doctoral students and those with permission of instructor. A course intended to meet the needs of students who desire to carry on individual investigation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9287. Practicum Corr Remed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9288. Instr. Pract: Corr/Remed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9289. Fieldwork Disabilities Sty. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9487. Pract: Program Supv.. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9489. Field Exp & Practicum. 3 to 6 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9587. Prac Intro to Diagnosis. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9987. Teaching Apprenticeship. 3 Credit Hours.**

This course is designed to provide graduate students with hands-on teaching experience in higher education under the mentorship of a full-time faculty member. The purpose of the Teaching Apprenticeship is to prepare students for independent teaching that is central to academic careers and that will be required for many funding opportunities during graduate school. Because students' interests and expertise and the needs of the college vary, placements for the Teaching Apprenticeship will differ from student to student.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9991. Research Apprenticeship. 1 to 3 Credit Hour.**

Working under the close mentorship of a faculty member, students actively engage in research and produce a scholarly product such as a submission to an academic conference, an article or chapter or a grant proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9993. Master's Comprehensive Examination. 1 to 6 Credit Hour.**

This course is for the Master's comprehensive examination in the College of Education. You should register for the section specific to your advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9996. Thesis Credits: Masters. 1 to 6 Credit Hour.**

Students complete a thesis or project under the supervision of their advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9998. Dissertation Proposal Design. 1 to 3 Credit Hour.**

Proposal writing. Limited to those who have passed the Preliminary Exams. Repeatable.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDUC 9999. Doctor of Education Dissertation. 1 to 6 Credit Hour.**

Dissertation research. Limited to those elevated to candidacy/class 9.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Educational Administration (EDAD)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**EDAD 5027. Research-Based Practices. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5063. Educational Reform. 3 Credit Hours.**

This course identifies current education reform interventions that are provoking change. Additionally, the federal legislation targeting school reform and the implementation of federal programs locally, as well as the politics of federalism in education, are examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5201. Action and Collaborative Research Seminar. 3 Credit Hours.**

Action research techniques for the classroom/educational setting. The focus of the action research is problem-driven rather than method-driven. Collaborative research efforts are encouraged.

This course is a seminar intended to facilitate the development of reflective practitioners and participatory researchers - educators who perceive classrooms and schools as sites of inquiry. The course is designed to help students develop understandings and skills needed to accomplish the following: (1) identify problems in classrooms and/or schools that can be addressed via research; (2) locate appropriate action and/or teacher research studies for their educational needs; (3) interpret the results of action and/or teacher investigations; and (4) know how to carry out aspects of teacher and/or action research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5300. Intro Issues Sch Ldshp. 3 Credit Hours.**

This course introduces students to the program's goals and theoretical foundations to help them assess and reflect on their own learning needs as they continue through the program. The course surveys the effective leaders, leadership styles, organizational theory, and decision-making literature(s) from across disciplines to orient students to the school context and examine the role and potential of the individual school leader. Particular attention will be paid to the impact of the leader's values, knowledge, skills, and behaviors on teaching and learning for adults and children within the school and school community.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDAD 5301. Leadership for Learning. 3 Credit Hours.**

This course allows students the opportunity to engage in rigorous work designed to challenge traditional paradigms of school leadership and to explore values and beliefs underlying leadership needed for school reform in pre K-12 schools today. Students will be exposed to concepts from current research in developing professional learning communities, collegiality, instructional leadership, data driven decisions and assessment. Coursework includes interactive case studies, team projects, and guest speakers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5302. Contexts for Sch Reform. 3 Credit Hours.**

This course will focus attention on schools foundation within a distinctly American cultural, constitutional, and legal framework, particularly the internal system-based and external legal, policy, and political environments that affect school policy and practice. TA survey of milestones in contemporary education history/reform, with specific attention to the education of diverse groups provides historical context. Students will examine and apply to practical cases 1) federal, state, and local laws, policies, and regulations and the implications of these for school leadership; 2) literature and case studies on education reform efforts at both the district and school levels, including the forces that influence the outcomes of education reform historically and at the present time; and 3) the school and district as complex systems, as well as strategies used to manage change across system levels.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5303. Ldshp in Diverse Context. 3 Credit Hours.**

This course will examine the issue of diversity in schools in all its dimensions to better understand the challenges of creating schools that ensure the fair and equitable treatment, opportunity, and successful educational outcomes for all students. The course will survey the history and current policy and practice contexts for serving historically under-served/under-performing student populations (e.g. high-poverty students, minorities, English-language learners, and students with disabilities). The range of issues presented by diverse student populations and their impacts on the role of the school leader will serve as the foundation of this course. Emphasis will be on better identifying and addressing the needs of particular students through the use of assessment, research, and data; accessing a variety of available resources (e.g. research, technical assistance); identifying models of effectiveness; and leading school change to meet the needs of all children and close the achievement gap(s) so that all children achieve at high levels.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5304. Sch Operations, Mgmt, Tech. 3 Credit Hours.**

Effective school leaders must effectively lead all aspects of the internal and external school environment. This course provides an introduction to the various operations responsibilities of the principal-plant, budget, human resource, technology, labor and public relations management-and strategies for better aligning school resources (e.g. time, space, teachers, materials) to the vision for improvement. The course will review relevant laws, policies, and standards of practice and progress monitoring in each area. Across topics, students will be supported in developing a data-driven lens that will help them to reflect on and critically assess factors related to implementation progress, particularly the extent to which people and/or processes are affect improvement work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5305. Knowledge Sch Improve. 3 Credit Hours.**

Availability of considerable amounts and types of research and data does not guarantee accurate interpretation or use. This course will help students to become skillful users of information to enabling them to make intelligent, timely decisions-to be effective and creative problem solvers. In particular, the course will help students to organize and use data to identify those aspects of their school's performance most critical in helping them to reach state standards; sense and diagnose problems and their root causes before they measurably impact performance; read and interpret education research to identify reliable, actionable information on effective programs in support of school progress toward those standards; thoughtfully plan for and implement applications of research with fidelity to the model(s); continuously monitor progress and evaluate outcomes of specific strategies; and intelligently marshal resources based on these assessments and articulated goals. In addition to the development of specific functional/technical skills, the program will help participants to develop specific habits of mind-orientation toward inquiry; reflection; quality problem solving; and performance-focused, continuous improvement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5306. Change Leadership. 3 Credit Hours.**

A required set of skills for tomorrow's educational leaders is the ability to initiate and sustain continuous improvement and results. This course will explore a variety of literature, research-based practices, and case studies to help students to recognize conditions/variables (e.g. resources, culture, organizational dynamics and changes) in school and community contexts, and how to effectively and strategically navigate the landscape towards school improvement. Particular emphasis will be on helping students develop as reflective, ethical leaders.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5307. Clin Exp in Sch Ldship. 3 Credit Hours.**

This course is designed to fulfill the internship requirements for a person seeking the Pennsylvania Administrative I certificate (school principal, K-12). In order to be recommended for the Pennsylvania Administrative I certificate, the student must complete both Educational Administration courses 9189 and 9289 (3 semester hours each). This course is designed to meet all of the PIL Standards. This year long internship along with a 20 hour internship in each course in the principal certification program will give a university student a total of 360 hours of field experience. The internship serves as a bridge between university coursework and the world of professional practice in the school community. It helps aspiring leaders translate what they study into effective practices in an authentic work setting. The student engages in administrative work under the direction of an on-site mentor (an administrator or supervisor) in a school district either where the student is employed or in another district.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5308. Clinical Experiences in School Leadership 2. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5402. Action and Collaborative Research Seminar. 3 Credit Hours.**

Action research techniques for the classroom/educational setting. The focus of the action research is problem-driven rather than method-driven. Collaborative research efforts are encouraged.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5403. Economics of Education. 3 Credit Hours.**

Education plays a central role in the economy through its effects on the labor force, distribution of income, and individuals' earnings and quality of life. This course will provide an introduction to the concepts of economics and how these can be applied to education. Topics to be discussed include education markets and financing (both K-12 and higher education), education production, teacher labor markets, school choice, and school accountability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5404. Federal Policy and Local Impact. 3 Credit Hours.**

This course is designed to expand graduate students' understanding of education policy, specifically federal policy and its impact on a local level (i.e., state, district, school). The course will focus on understanding politics and policy making processes, research impact on policy development, and the impact of epistemologies (e.g., feminism, critical race theory, critical theory, etc.). This course will develop student understanding through exploration of major educational policies (e.g., Title 1 - school improvement, School Desegregation, Bilingual Education, High School Reform, Special Education, Teacher Quality and Effectiveness, and Assessments and School Accountability). Each policy review will include a historical policy overview (i.e., policy development and epistemology), its considerations of social problems (i.e., poverty, racism, disparate educational and social outcomes, poorly managed schools, etc.), the policy making process, and the process of policy implementation (i.e., state and local regulations and guidance). Graduate students will be exposed to developing policy briefs on 2-3 educational policy areas, and (re)develop one education policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5503. The Principalship. 3 Credit Hours.**

The principal's responsibilities in the organization and administration of a school are examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5505. Introduction to Educational Administration and Supervision. 3 Credit Hours.**

An overview of educational administration is provided. This is a required first course for educational administration majors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5513. Fostering Professional Development: Coaching and Mentoring. 3 Credit Hours.**

Schools and school systems are locations of constant change. Especially in the post-Internet world, teachers, school leaders, and other education professionals are continually expected to update their practice and adapt to evolving standards and ongoing pressure to narrow the achievement gap and improve student performance. This course is designed to assist supervisors, coaches and mentors in their efforts to respond to and manage the continuous improvement environment common in schools today. Learning goals include enhanced communications skills, the ability to assess teacher practice and provide useful feedback, and the ability to model good practice, set goals and develop growth plans. The course will emphasize best practices in adult learning and professional development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5517. Emotions, Diversity and Democratic Leadership. 3 Credit Hours.**

This course introduces students to relevant literature on emotional intelligence, leadership and diversity and to the practice of leading diverse groups. Students learn foundational capacities in emotional intelligence, uncovering common motivations for collaboration, and developing trust in a diverse group. The course also focuses on factors that support and prevent collaboration in various educational settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5531. The School Superintendent: Chief Educator and Chief Executive I. 3 Credit Hours.**

This is a year-long course. Semester I enables the candidate to know; Semester II enables the candidate to be able to do. This is the first of a two-part course and a prerequisite for Part II. A school system is a human organization whose mission is the education of children and youth. The system is composed of a series of interdependent parts, including the formal organization, informal organization, people, status and role-expectancy pattern, and the physical environment. The dynamic forces of the systems concept is integrative. At its core is a goal structure around which the organization is designed, and to which the separate but interrelated components are functionally and operationally united to serve the purpose for which it exists. In a school system, the systems approach focuses upon the transforming of human and nonhuman resources into educational programs and services through the interaction of human and related system elements. Leadership and Administration in a contemporary educational environment is a social process that takes place within the context of a standards aligned system. This process can be viewed through three points of view. Structurally, leadership and administration is seen as relationships among levels of responsibility within the system. Functionally, these relationships are the locus for allocating and integrating roles and resources in order to achieve the goals of the system. Operationally, the administrative process takes effect in situations involving person-to-person interactions. The ways in which the total system is designed and implemented, from the subsystems to the integrated whole, can affect the willingness of system members to cooperate in achieving organizational goals. Specific focus on budgeting, resource allocation, technology, and policy development are addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5532. The School Superintendent: Chief Educator and Chief Executive II. 3 Credit Hours.**

This is a year-long course. Semester I enables the candidate to know; Semester II enables the candidate to be able to do. The prerequisite is EDAD 5531: The School Superintendent: Chief Educator and Chief Executive I. A school system is a human organization whose mission is the education of children and youth. The system is composed of a series of interdependent parts, including the formal organization, informal organization, people, status and role-expectancy pattern, and the physical environment. The dynamic forces of the systems concept is integrative. At its core is a goal structure around which the organization is designed, and to which the separate but interrelated components are functionally and operationally united to serve the purpose for which it exists. In a school system, the systems approach focuses upon the transforming of human and nonhuman resources into educational programs and services through the interaction of human and related system elements. Leadership and Administration in a contemporary educational environment is a social process that takes place within the context of a standards aligned system. This process can be viewed through three points of view. Structurally, leadership and administration is seen as relationships among levels of responsibility within the system. Functionally, these relationships are the locus for allocating and integrating roles and resources in order to achieve the goals of the system. Operationally, the administrative process takes effect in situations involving person-to-person interactions. The ways in which the total system is designed and implemented, from the subsystems to the integrated whole, can affect the willingness of system members to cooperate in achieving organizational goals. Specific focus on budgeting, resource allocation, technology, and policy development are addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in EDAD 5531.

**EDAD 5552. Issues in Higher Education. 3 Credit Hours.**

The purpose of this seminar is to provide an introduction to the theory and practice of student affairs in American colleges and universities. This course looks at the responsive and adaptive nature of institutions of higher education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5601. The Two Year College. 3 Credit Hours.**

This course provides a critical analysis of the characteristics, scope, public policy issues, and impact of two-year colleges in the United States.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5615. Gender Issues in Education. 3 Credit Hours.**

This course is a graduate-level seminar intended to place gender at the center of the discussion of education, in general, and educational leadership, in particular. Although gender is at the heart of this course, considerable emphasis is also placed on the intersection of race and social class in education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**EDAD 5641. Finance and Business Management. 3 Credit Hours.**

Basic principles of finance and administration with an emphasis on practical implications for the workplace constitute the framework for this course. Simulation of budgets and finance problems enhance understanding.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5651. School Plant. 3 Credit Hours.**

The planning, construction, operation, and maintenance of the school plant is discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5652. Educational Policy: Decision Making. 3 Credit Hours.**

This blended policy course focuses on public policymaking and its impact on K-16 institutions. Discussions of contemporary decision-making theories guide this course. Practical applications to education policy and decision making are detailed utilizing decision-making practices in budgeting, public administration, drug trafficking, and information systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5653. Educational Leadership as Civic Leadership. 3 Credit Hours.**

This course aims to instill sensitivity in the students to the importance of civic leadership and an understanding of the potential for education leaders to engage systematically and productively with their various "publics" to promote the common good.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Educational Administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5654. Leadership in Higher Education. 3 Credit Hours.**

While many Educational Administration classes on leadership focus on the functional roles and hierarchical structures of leaders within the educational institutions, this class will focus on the development and expression of individual leadership qualities.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Educational Administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5655. Higher Education Economics and Finance. 3 Credit Hours.**

This course provides aspiring administrators and academics, interested in research and teaching in higher education, with a basic overview of economics and finance in higher education.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Educational Administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5661. Personnel Administration. 3 Credit Hours.**

This course examines the principles, policies, and processes of personnel administration in school systems. It may satisfy an elective in programs leading to the Master of Education degree, principal's certification or central certification in Pennsylvania, and the Doctor of Education degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5671. Public Relations. 3 Credit Hours.**

This course provides an introduction to school public relations, policies, and practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5711. Politics of Education. 3 Credit Hours.**

This course draws its intellectual base from research and theory in political science and public policy. Additionally, these disciplines provide the frameworks used to interpret the political dynamics among actors in schools, universities, governmental agencies, and other organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5715. Instructional Leadership. 3 Credit Hours.**

This course focuses on the principles and practices directed toward the improvement of the relationship between the individual and the organization, as well as the development of a positive organizational climate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5742. Pro-Seminar in Ed Policy. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5746. Management of School Fiscal Affairs. 3 Credit Hours.**

The focus is on basic accounting principles, records, and reports appropriate for school fund financial management and bond accounting, cash management, and encumbrance systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5771. School Law. 3 Credit Hours.**

This course focuses on the legal principles within which public education functions. Court cases and school codes are analyzed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5772. Law and the Administration of Higher Education. 3 Credit Hours.**

This course emphasizes the legal principles within which higher education functions, with emphasis on structure, personnel, programs, property, and finance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 5895. School Violence: Risk Prevention. 3 Credit Hours.**

This seminar provides descriptive analyses reflective of the differing perspectives of students, teachers, principals, and parents, and various concerns and issues. This interactive class examines successful school violence prevention programs, how they are influenced by school policy, and how they are administered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8067. Case Study Research Approaches. 3 Credit Hours.**

Case study methods for clinical investigations and field studies in school are presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8093. Administration Research Seminar. 3 Credit Hours.**

This course is intended to assist students in the dissertation proposal process. It focuses on the dissertation topic and key questions; the literature review for the proposal; the methodological plan for the research; and a timeline for moving toward the proposal defense.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8461. Ethical Leadership. 3 Credit Hours.**

This course focuses on ethics, primarily from an analytical perspective. It is designed to explore the moral and ethical dimensions of the work of educational leaders, in particular, school superintendents and special education practitioners dealing with an over-representation of diverse learners. The hope is to assist these leaders to resolve ethical dilemmas in more reflective, intelligent, and principled ways.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8553. Democratic, Equitable, and Ethical Leadership. 3 Credit Hours.**

This course is designed to be a research project in spirit and function. Specifically, we seek to answer this question: What are the underlying qualities that make an individual a democratic, ethical leader? While some answers have been reported in the field, the case is hardly closed because the problem is far from a simple one. Rather than employing a didactic and deductive process of imposing a definition upon students, our approach will follow an inductive process patterned after Bruner's (1974) concept attainment model. Using a wide cross-section of women and men from the US and around the world, both in our own time and from time past, the class will consider the common qualities these leaders demonstrate as they faced their greatest personal and professional challenge. Some will come directly from the field of education. Others are identified with different professions. These have had a major impact on society and have, therefore, shaped education. The class will consider this inductive study of leaders and construct a vibrant and organic definition of democratic ethical leadership that will inform the practice of class members.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8635. Education Policy Analysis. 3 Credit Hours.**

This course will focus on current issues in education policy, with an emphasis on identifying underlying causes and exploring potential solutions to problems facing public schools. Although the primary focus will be on education policies, we will also consider social policies that shape educational opportunity and schooling. Throughout the semester we will evaluate the evidence for and against various policies, using the tools of policy analysis. Using the tools of policy analysis, our focus will be on understanding the problems these policies are trying to solve, the success of existing policies, and the potential alternative policies that might be available to solve them. While it is impossible to provide an in-depth analysis of such a broad topic, we will cover many of the major initiatives including school finance reforms, market-based reforms, accountability, and teacher recruitment and evaluation. While the content for the first four sessions is set, specific topics for the remaining sessions will be determined at the beginning of the semester to reflect the interests of enrolled students. Note: Prior to summer 2, 2017, the course title was "Current Issues in Educational Policy."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8636. Research for Change. 3 Credit Hours.**

Educational leaders, particularly superintendents, are increasingly being held accountable for student performance and achievement, but also for how data are collected, presented and used to monitor students' progress and to inform other decision-making in school districts. The purpose of this course is to help participants acquire the abilities to critically consume, evaluate and produce research and evaluation information that leads to change in leadership. This course focuses on developing skill sets to critique research and to conceptualize, design and conduct practitioner-based research projects specifically related to the practice of educational leadership. Emphasis will be placed on understanding how educational research contributes to knowledge about effective professional practices related to student performance and achievement. Research design, data collection and analysis procedures, coupled using data to inform leadership decision will be explored through lecture, class discussion, readings, small work group activities and individual/team projects. Individual and team projects are the primary vehicles for applying analytical tools and research procedures for change in leadership. In addition, the course addresses professional and ethical standards for best practice in developing, implementing and using research information. The framework and content for this course are based on standards developed by the Pennsylvania Inspired Leadership program. Ideally, research helps educational leaders question, explore, analyze, and summarize problems of interest. Methods, designs and data analysis procedures are selected to match a specific research topic, question or context. In order to make these choices wisely, educational leaders should have exposure to and knowledge of a variety of tools and procedures. In general, this course examines the logic and procedures of research and evaluation of educational issues with a heavy emphasis on application (i.e., use of data sources, sub-group analysis for decision making). This course (structured in a research workshop format) offers a doctoral-level survey of research and evaluation methods in education focused on decision-making. The course will cover both the theory and practice of research for change in educational leadership settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8653. Civic Leadership. 3 Credit Hours.**

This course is designed to introduce participants to the research on and practice of civic leadership. We will discuss the basic concepts, theories, and practices related to this dimension of leadership, specifically in regard to our own roles as educational leaders.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8755. Organizational Dynamics. 3 Credit Hours.**

Educators who wish to exercise leadership need to understand their organizations in sophisticated ways. In an era marked by turbulence, rapid change and a rising chorus of seemingly confused perspectives, this may appear to be an elusive goal. Yet, those are the conditions in which we find ourselves. If we faced a simple task, it might do to use one point of view. But how do we know that others share our particular way of looking at things? How do we know that we have the clearest way of understanding our organization? Is there even one possible best way? It seems most appropriate and wise to try to see organizations from several vantage points and through the theoretical thinking of many scholars. The purpose of this course is to help you understand organizations in newer, more complex ways and to further your ability to use this enhanced perspective to move your organization along.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8775. Understanding Organizational Dynamics in Educational Settings. 3 Credit Hours.**

Educators who wish to exercise leadership need to understand their organizations in sophisticated ways. In an era marked by turbulence, rapid change and a rising chorus of seemingly conflicting perspectives, this may appear to be an elusive goal. Yet, those are the conditions in which we find ourselves. If we faced a simple task, it might do to use one point of view. But how do we know that others share our particular way of looking at things? How do we know that we have the clearest way of understanding our organization? Is there even one possible best way? It seems most appropriate and wise to try to see organizations from several vantage points and through the theoretical thinking of many scholars. The purpose of this course is to help you understand organizations in newer, more complex ways and to further your ability to use this enhanced perspective to move your organization along.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8785. Collective Negotiations. 3 Credit Hours.**

The negotiations process in relation to the chief school administrator's responsibilities is discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8787. Administration of Higher Education. 3 Credit Hours.**

The development and scope of higher education, the principal organizational components of colleges, and contemporary problem areas are emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8905. Advanced Seminar I. 3 Credit Hours.**

Intensive group work on selected administrative topics is undertaken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8935. Values, Ideology & Education. 3 Credit Hours.**

This course assists students in identifying the cultural forces, institutional features, policy network activities, and interest groups influencing education policy decision making in governmental arenas and other organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 8941. Planning in Higher Education. 3 Credit Hours.**

The planning process in the college and university context is presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EDAD 9189. Field Experience. 3 Credit Hours.**

Practical administrative experience in one's own school system is undertaken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDAD 9285. Internship in Administration (Part I). 3 Credit Hours.**

This course is designed to fulfill the internship requirements for a person seeking the Pennsylvania Letter of Eligibility certificate (school superintendent, K-12), the New Jersey certification, and for others seeking similar practical experiences. The internship serves as a bridge between university coursework and the world of professional practice in the school community. It helps aspiring leaders translate what they study into effective practices in an authentic work setting. The student engages in administrative work under the direction of an on-site mentor (an administrator or supervisor) in a school district either where the student is employed or in another district.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDAD 9286. Internship in Administration (Part II). 3 Credit Hours.**

This course is designed to fulfill the internship requirements for a person seeking the Pennsylvania Letter of Eligibility certificate (school superintendent, K-12), the New Jersey certification, and for others seeking similar practical experiences. PA requires 360 hours of field experience. In order to be recommended for the Letter of Eligibility certificate, the student must complete two semesters of an Internship. During each semester the candidate should spend 120 hours beyond their regularly scheduled duties for a total of 240 hours (EDAD 9285 and EDAD 9286). These are each 3 semester hours. The remainder of the experience hours are found in the other courses and add up to an additional 120 hours. The internship serves as a bridge between university coursework and the world of professional practice in the school community. It helps aspiring leaders translate what they study into effective practices in an authentic work setting. The student engages in administrative work under the direction of an on-site mentor (an administrator or supervisor) in a school district either where the student is employed or in another district.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDAD 9289. Secondary Field Experience. 1 to 6 Credit Hour.**

Practical administrative experience in one's own school system is undertaken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDAD 9982. Independent Study. 1 to 6 Credit Hour.**

Coursework is conducted on an individual basis with approval of the advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EDAD 9999. Doctor of Education Dissertation. 1 to 6 Credit Hour.**

Candidates who have successfully completed the preliminary examination must register continuously during the Fall and Spring terms until the dissertation has been accepted.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Educational Psychology (EPSY)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**EPSY 5499. ILT: Instructional Technology and Learning. 3 Credit Hours.**

Introduces characteristics and applications of basic instructional and computer technology in the teaching-learning process. Students will gain hands-on experience in the use of computer and adaptive and/or augmentative hardware and software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5501. ILT: Multimedia Learning. 3 Credit Hours.**

Provides conceptual discussion and hands-on exploration of technology applications including graphic, photographic, multimedia, audio, and video materials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5502. ILT: Desktop Publishing and Web Design. 3 Credit Hours.**

Presents elements of effective design characteristics for written and web pages will be discussed. Web page maintenance will also be presented. Students will create documents and web pages using appropriate software applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5505. ILT: Authoring Systems. 3 Credit Hours.**

Students explore capabilities of various authoring software. Based on instructional design principles, students will develop an interactive learning environment that includes various elements of sound, graphics and motion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5523. Introduction to Educational Psychology. 3 Credit Hours.**

The application of psychological theories to the learning processes and development of children and adolescents including the principles and procedures of assessment and evaluation as they relate to academic achievement and to teaching-learning activities. The primary objective is to facilitate a clear understanding of the complex and dynamic processes of learning and development as they related to the principles of learning and teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5529. Tests and Measurements. 3 Credit Hours.**

An introduction to tests and measurements. Reliability, validity, interpretation of standardized test manuals. Survey of standardized aptitude, achievement, and personality tests. Students learn how to construct valid classroom tests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5531. Learning Theories and Education. 3 Credit Hours.**

This survey course covers the nature of theory, the epistemological foundations of learning, and major theories of learning. Focusing on application in educational settings, the course includes associationist, behaviorist, cognitive information processing, and constructivist learning theories.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5541. Concepts in Human Development. 3 Credit Hours.**

Covers the major theoretical orientations and methodological approaches to human development. Uses a life-span approach to cognitive, social, and physical development, genetic influences, parental influences, language and perceptual development, intelligence, peer influences, parenting practices, moral development, and the development of gender identity among other issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5551. Introduction to Program Evaluation. 3 Credit Hours.**

Methods and approaches to evaluation; planning and conducting evaluations; problems confronting the evaluator; professional issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 5561. Development and Learning Over the Lifespan. 3 Credit Hours.**

This course is intended for master's and doctoral students seeking an introductory survey of how humans develop and learn in several key areas across the lifespan. To this end, the course addresses typical trajectories of development and learning in three major domains: cognition, social competence and interaction, and physical and motor skills. We will examine both domain-general theories of development and learning that guide thinking across all three domains of interest, as well as essential domain-specific theories and recent empirical research relevant to just one or two domains.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8625. Intermediate Educational Statistics. 3 Credit Hours.**

Survey of issues, problems, and approaches involved in using ANOVA, correlational, and nonparametric procedures. Emphasizes guidelines for selecting statistical tests, computer-aided computation, and interpretation of results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8627. Introduction to Research Design and Methods. 3 Credit Hours.**

The primary goals of this survey course are to help students understand (a) how to make optimal decisions with respect to their own research, (b) evaluate the decision-making and research practices of other researchers, and (c) that there is no one "best" method (i.e., the best method depends on a researcher's goals; avoid mismatching goals and methods). To be an effective decision-maker, a researcher has to coordinate multiple goals and develop a set of effective options for meeting these goals. The present course is designed to help students identify their goals, develop a set of plausible options (i.e., possible research methods), and evaluate the pros and cons of these options. It is also hoped that students will gain increased insight into the ethics of research and how to write effective journal articles and research proposals. Ideally this course should be taken early in one's program and in conjunction with an epistemology of research course. It is hoped that the one-class introduction to a specific methodology (e.g., ethnography or meta-analysis) will prompt a student to take a follow-up course that spends the entire semester on that method.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8629. Test Construction and Validation. 3 Credit Hours.**

Students will plan, develop, construct, revise, and validate an instrument. Methods for assessing reliability and validity (especially construct validity) are emphasized. Item analysis techniques are included. Basic approach and components of Item Response Theory (IRT), including introduction to the Rasch models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8638. Seminar in Instructional Theories. 3 Credit Hours.**

Examines contemporary instructional theories and models. Includes consideration of various conceptions of the learner and the instructional process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8639. Instructional Design and Development. 3 Credit Hours.**

Covers strategies and techniques for creating or modifying instructional resources. Emphasis will be given to instructional design models for the systematic design of instruction, including adaptive and/or augmentative technology. Students will employ a specific instructional design model and apply select instructional theories in the design of an instructional unit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8735. Proseminar in Learning. 3 Credit Hours.**

Extended treatment of selected topics in educational psychology concentrating on issues dealing with learning and instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8741. Proseminar in Human Development. 3 Credit Hours.**

Extended treatment of selected topics in human growth and development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8825. Advanced Data Analysis. 3 Credit Hours.**

A survey of statistical techniques involving both between groups and correlational analyses. Students use SPSS to analyze data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8826. Multivariate Research Methods. 3 Credit Hours.**

A survey of multivariate data analysis procedures, with a focus on parametric techniques. Students use computer library programs (SPSS) to analyze data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**EPSY 8827. Experimental Design. 3 Credit Hours.**

Emphasizes parametric analyses of variance and covariance, and their nonparametric analogs. Students use computer library programs (SPSS) to analyze data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8960. Seminar Series: Problems in Educational Psychology. 3 Credit Hours.**

Specified problems, research, and practice in educational psychology. May be repeated for credit Specific offerings change from semester to semester; contact Department for current offerings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPSY 8970. Seminar Series: Problems in Educational Psychology. 3 Credit Hours.**

Specified problems, research, and practice in educational psychology. May be repeated for credit when approved by the instructor. Specific offerings change from semester to semester; contact Department for current offerings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPSY 8980. Seminar Series: Problems in Educational Psychology. 3 Credit Hours.**

Specified problems, research, and practice in educational psychology. May be repeated for credit when approved by the instructor. Specific offerings change from semester to semester; contact Department for current offerings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPSY 8985. Teaching in Higher Education. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 8986. Proseminar in Educational Psychology. 3 Credit Hours.**

The main purpose of the Proseminar in Educational Psychology is to advance students' professional development in the domain of educational psychology. The course aims to contribute to the development of knowledge of the field of educational psychology and simultaneously to students' exploration of their career goals in the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 9287. ILT: Practicum in Instructional Technology. 3 Credit Hours.**

Provides for one hundred hours of hands-on experiences working in a professional organization consistent with the student's goals and objectives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPSY 9982. Independent Study in Educational Psychology. 1 to 6 Credit Hour.**

A course intended to meet the needs of students who desire to carry on individual investigation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPSY 9991. Directed Res & Teach Pse. 1 to 12 Credit Hour.**

Supervised apprenticeship in an educational activity central to educational psychology. Examples of possible apprenticeships are: research apprenticeship, educational program evaluation apprenticeship, educational product development apprenticeship, and teaching apprenticeship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPSY 9995. Master's Capstone in Educational Psychology. 3 Credit Hours.**

In this course, students completing a master's degree in educational psychology will work with an advisor to construct a capstone project. Drawing on the program's core ideas in human learning and development, as well as psychological principles in education, students will complete a summative project in which they apply these ideas to a real-world problem in the field. The final product for the course will include a written document summarizing this work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPSY 9996. Master's Thesis in Educational Psychology. 1 to 6 Credit Hour.**

Limited to those who plan to complete the master's degree by writing a thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPSY 9999. Dissertation in Educational Psychology. 1 to 6 Credit Hour.**

Dissertation research limited to doctoral candidates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Electrical Engineering (ECE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ECE 5022. Engineering Analysis and Applications. 3 Credit Hours.**

Vector space, basis, projection, null space, function space, L2 and space of continuous functions, Hilbert space, orthogonality, generalized Fourier series, linear transformation, adjoint transformation, eigenvalue problem, linear functional, Gateaux and Frechet differential, constrained optimization, infinite dimensional systems, complex analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5033. Probability and Random Processes. 3 Credit Hours.**

Sets and events, Random variables, Distribution and density functions, Functions of multiple random variables, Moments and conditional statistics, Information entropy, stochastic processes, wide-sense stationary process, ergodicity, correlation, and power spectrum of stationary processes. Applications to sampling theory and signal modulation and detection.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5110. Special Topics in Electrical and Computer Engineering. 3 Credit Hours.**

Selected topics on current technologies in various research areas under electrical and computer engineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 5116. Spacecraft Systems Engineering. 3 Credit Hours.**

The concept of systems engineering is introduced using a satellite application. Systems engineering is a top-down approach to the design, implementation, testing, and deployment of large-scale systems to meet the needs of users. The topics will include systems engineering methodology, dynamics of spacecraft, and celestial mechanics. This course will also introduce the notion of invention and innovation, and how they are related to the intellectual property issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5314. Microelectronics. 3 Credit Hours.**

Advanced study of electronic devices and their applications to linear, non-linear, and digital circuits; transistors, FET's, amplifiers, digital integrated circuits, and VLSI's; Software design emphasized. A term project will be assigned. NOTE: Students cannot earn credit for both ECE 4312 and ECE 5314.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5324. VLSI System Design and Testing. 3 Credit Hours.**

An introduction to a hierarchical design methodology of VLSI; study of basic logic elements and design methods in nMOS and CMOS; development of testable designs; the physics of MOS devices and fabrications processes; design rules and computation of circuit parameters from layout; system level design techniques; circuit structures with built-in self-test, design-for-test and self-checking features. NOTE: Students cannot earn credit for both ECE 4322 and ECE 5324.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 5314.

**ECE 5344. Fundamentals of Bio-MEMS and Biomedical Microdevices. 3 Credit Hours.**

The course introduces the basic concepts for design and principle of bio-micro-electro-mechanical systems (BioMEMS) and biomedical micro-integrated systems. Wireless communication in context to biomedical devices are described. Microelectronics process modules used in the design and fabrication of MEMS and micro-integrated systems are presented. Applications of these systems in a variety of sensors and transducers are considered. Recent advances in biomedical applications of MEMS are discussed in detail.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5412. Control System Analysis. 3 Credit Hours.**

Review of control concepts and application; state space representation of dynamical systems; controllability, observability; time invariant and time varying systems, design of full state feedback and output feedback systems; eigenstructure assignment; the linear quadratic regulator; Kalman filter; estimation and filtering; robust control via eigenstructure design, Kharitonov theorem, application examples.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5432. Game Theory and Applications in Engineering. 3 Credit Hours.**

The course covers the basic framework for strategic games and its various manifestations. Topics include matrix games, extensive form games, mixed strategies, repeated games, Bayesian games, and cooperative games. The course continues with various applications of game theory in engineering systems. The course also covers applications of game theory as a design tool for engineering multi-agent systems, i.e., systems that are comprised of a collection of programmable decision-making components.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5442. Engineering Optimization: Methods and Applications. 3 Credit Hours.**

Optimization aims at maximizing or minimizing an objective in the presence of complicating constraints. This course will cover fundamental concepts and methods in optimization and their applications in engineering systems. The focus will be on linear and nonlinear system of equations, unconstrained optimization, equality-constrained optimization, and inequality-constrained optimization, with applications in electrical engineering systems. Topics include, but are not limited to, formulation of nonlinear optimization problems, optimality conditions for convex optimization, review of classical optimization techniques, and illustrative examples from electric power systems. Numerous applications from various fields of engineering are presented. The goal is to maintain a balance between theory, numerical computation, problem setup for solution by optimization software, and applications to engineering systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5512. Introduction to Digital Communications. 3 Credit Hours.**

Baseband pulse, digital, and passband communications systems; properties and bandwidth of signals and noise; detection of signals in noise; signal-to-noise ratio (SNR); distortionless transmission and intersymbol interference; pulse code modulation; amplitude, phase and frequency modulation and demodulation; simulation of communication systems. NOTE: Students cannot earn credit for both ECE 4512 and ECE 5512.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5514. Digital Signal Processing Analysis. 3 Credit Hours.**

Topics covered are: various types of digital signal processing (DSP) techniques such as convolution, correlation, and filtering, as well as Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) all pass and comb digital filters, the Discrete Fourier Transform, and the use of MATLAB as a tool for DSP software tasks. A term project will be assigned. NOTE: Students cannot earn credit for both ECE 4522 and ECE 5514.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5516. Introduction to Communication Networks. 3 Credit Hours.**

Introduction to Internet and TCP and IP protocols, telephone networks, Local Area Networks, packet switching, ATM, and other related topics. NOTE: Students cannot earn credit for both ECE 4532 and ECE 5516.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5526. Engineering Principles of Computer Intrusion and Detection. 3 Credit Hours.**

This course provides an introduction of computer intrusion and detection techniques. It gives theoretical and practical foundations necessary to continue further learning of computer security. We will study and analyze critical security vulnerabilities of software design and network and information systems. The learned skills are widely used by IT security analysts in industries. At the end of the class the students will be able to understand basic concepts of intrusion detection and traffic analysis from a practical point of view. This course will provide the tools and knowledge necessary to continue further learning in computer security and advance further in the profession.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECE 5516.

**ECE 5528. Introduction to Cryptography and Information Security. 3 Credit Hours.**

This course covers the theory and practice of computer communications security. Topics include symmetric encryption, public and private key cryptography, message digests, digital signatures, secure email, and various types of authentication methods. We will review various cryptographic primitives, algorithms, intrusion attacks, and security protocols.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5538. Hardware and Industrial Control System Security. 3 Credit Hours.**

This course covers the theory and practice of hardware and control system security. Topics include digital system security, side channel attacks on cryptographic systems, industrial control system security, and intellectual property protection. We will review hardware implementation of cryptographic primitives, secure hardware design, and security protocols. Note: Credits of this course will not apply to MSEE and PhD (EE) degree programs unless preapproved.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECE 5528.

**ECE 5541. Hardware Security Lab. 3 Credit Hours.**

This laboratory includes a university version of wired (with internet protocol suite of packets and layers) and wireless (with IEEE802.11 layers) equipment and physical network along with open source network security software. Depending on the application, the lab provides students flexibility to fully analyze protocols and security vulnerability with respect to the network, Programmable Logic Controller (PLC), and power grid, etc. Students gain hands-on experience from role-playing both as a black-hat hacker by instigating attacks and a white-hat hacker by performing digital forensics and penetration tests. Note: Credits of this course will not apply to MSEE and PhD (EE) degree programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5548. Secure Computer Memory Architecture and Intrusion Prevention Methodologies. 3 Credit Hours.**

This course covers physical computer memory organization and areas of vulnerability such as susceptibility to buffer overflow and Direct Memory Access (DMA) attacks. An overflow attack happens when the data written to a physical memory exceeds its allocated buffer size, which is in violation of memory safety rules. DMA happens when a data transfer is done via direct physical memory access, thus bypassing operating system's supervision. Such a "back door" access is intended to increase the hardware performance throughput but inadvertently creates a major hole in system security. This course analyzes physical memory design methodologies to prevent such intrusions. Note; Credits of this course will not apply to MSEE and PhD (EE) degree programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5558. Reverse Engineering. 3 Credit Hours.**

This course covers methodologies, equipment and software tools used to extract information and build knowledge from sophisticated modern-era hardware and software systems for reverse engineering purposes. Some systems require invasive and destructive technique to get to the source of the information, while for others, non-invasive monitoring and fault injection are sufficient methods. Reverse engineering equipment and tools include but are not limited to debuggers, disassemblers, logic analyzers, oscilloscopes, and simulators. Note: Credits of this course will not apply to MSEE and PhD (EE) degree programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5562. Wireless Communications Engineering. 3 Credit Hours.**

This course provides a comprehensive introduction of physical-layer wireless communications, including: Cellular concepts; Wireless channel modeling; Modulation techniques; Multiple access techniques; Channel coding and wireless system capacity; Receiver diversity; Transmit diversity and multiple-input multiple-output (MIMO) technology; Equalization; Orthogonal frequency division multiplexing (OFDM); Wireless systems and standards, and latest developments in wireless technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5564. Cloud Computing Security. 3 Credit Hours.**

This course first introduces students to the essentials of a cloud computing environment: technologies, infrastructure, platforms, and application software. Students then build a cloud computing system to monitor its vulnerability, build security measures, and attack it to further refine the security solution. OpenNebula Systems, an open source cloud computing management toolkit and a commercial cloud computing service, will be used for the exercises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5566. Forensics for Cyber Physical Systems Security. 3 Credit Hours.**

This course first introduces students to the construct of today's cyber physical system, which is an integration of software and hardware (cyber and physical), built upon an infrastructure of communications network. Cyber physical systems are an integral part of our daily lives that must deliver ultimate safety, security, and reliability, such as in automotive, medical, transportation, power, water, and nuclear energy systems. Therefore, an attack on any such system can be catastrophic. We will analyze hardware components and structure and study their vulnerability to exact forensic artifacts, and why it is important to have trust-worthy hardware, starting from secure integrated circuit design and manufacturing as a baseline. Tools will be used in investigation and forensic analysis. Advanced topics go beyond identification of the attack vector and region, and root causes by researching on self-monitoring, self-repair and self-healing hardware.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5568. Engineering Project Quality and Risk Management, and ISO Standards. 3 Credit Hours.**

This course covers quality and risk management which are under the umbrella of project management, both go hand-in-hand to ensure best practices for engineering for products. Four components of quality management are quality planning, quality assurance, quality control and quality improvement. Also covered is ISO9001, quality management systems standards. Risk management includes enterprise risk management strategy, risk assessment, risk responses, risk communication and awareness training, and risk acceptance. Also covered is ISO 27001 and 2 on information security standards and best practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5572. Certificate Preparation - (ISC)2/CISSP-Information Systems Security. 3 Credit Hours.**

The International Information Systems Security Certification Consortium (ISC)2 is a non-profit organization that specializes in information security certifications, which demonstrate certificate owners' competence in the subject matter. (ISC)2 is known as the "world's largest IT security organization" and among its certificates, Certified Information Systems Security Professional (CISSP) is the most widely valued. This course covers preparation for the CISSP-ISSEP certification, where ISSEP (Information System Security Engineering Professional) focuses on engineering aspects of the CISSP. The ISSEP exam focuses on four areas of information security: (1) Systems Security Engineering, (2) Certification and Accreditation (C&A) / Risk Management Framework (RMF), (3) Technical Management, and (4) United States Government Information Assurance Related Policies and Issuances. Note: Credits of this course will not apply to MSEE and PhD (EE) degree programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5574. Certificate Preparation - Cisco Networking Academy. 3 Credit Hours.**

This course uses Cisco Networking Academy material to cover various Cisco Certified Network Security topics concentrating on network security principals, tools, and configurations, and includes a hands-on lab equipped with Cisco networking equipment. Note: Credits of this course will not apply to MSEE and PhD (EE) degree programs

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5575. Capstone Project. 3 Credit Hours.**

A Capstone Project is a work-study project where a student with support from his/her sponsoring entity works on a current or emerging challenge on cybersecurity. Engineering Resilient Systems (ERS) is an example of a DoD sponsored Capstone Project. Through Capstone Project, a student will develop tools and procedures to produce a complete and robust product requirement, make efficient and effective engineering decisions, consider manufacturability of a system design, and establish a baseline resiliency including Tactics, Techniques, and Procedures (TTP) against threats. Note: Credits of this course will not apply to MSEE and PhD (EE) degree programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5600. Graduate Seminar. 0 Credit Hours.**

Required seminar for graduate students in Electrical and Computer Engineering for scientific and professional development. Speakers for these seminars include prominent researchers from academic and professional backgrounds. Students will be graded on participation of at least 70% of the bi-weekly seminars during the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 5612. Advanced Processor Systems. 3 Credit Hours.**

Hardware description language (Verilog) design of processor systems for digital signal processing and data communication. Projects will be assigned in simulation and synthesis of dataflow and processor architectures targeting field programmable gate arrays (FPGA). NOTE: Students cannot earn credit for both ECE 4612 and ECE 5612.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5622. Introduction to Computer Architecture. 3 Credit Hours.**

Instruction set architectures, Register Transfer Level hardware description. Data-path design. Controller design. Caches and memory systems. Addressing. Microprogramming. Computer arithmetic. Survey of current computers and microprocessors. Projects will include Verilog/VHDL implementation of data-path components and testing them on FPGAs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5712. Power Systems Engineering. 3 Credit Hours.**

This course introduces the modern power systems and its changing landscape. The course covers the basics of power generation and transformers, and an introduction to power electronic devices, AC transmission and distribution, power flow, economic dispatch, transient and stability analysis, short circuit analysis, and HVDC systems, power system protection, power market deregulation. NOTE: Students cannot earn credit for both ECE 4712 and ECE 5712.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5714. Introduction to Intelligent Systems Engineering. 3 Credit Hours.**

Introduction of the use of artificial intelligence techniques to develop intelligent systems. The course gives the student 1) an overview of what artificial intelligence is and its current state; 2) an overview of intelligent systems --what they are and their possible future role in society; 3) a practical and theoretical knowledge of expert systems, their development, implementation and maintenance and 4) an introduction to intelligent tutoring systems and to provide a perspective about the potential impact of these systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5716. Power System Economics. 3 Credit Hours.**

This course aims at enriching course offerings for graduate students who would like to have a focus on electric energy. We will discuss major problems in power system economics, such as: optimization formulations and solutions; competition; bidding strategies; locational marginal prices; ancillary services; and investment decisions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in ECE 5712.

**ECE 5722. Power Electronic Devices and Systems. 3 Credit Hours.**

This course introduces power electronic devices and circuits, and their applications in modern power systems. Topics include DC-DC converters in buck and boost topologies, and their modeling and feedback control; AC-DC rectification and control; DC-AC inverters, modeling, and voltage and frequency control; Three-phase inverters, and HVDC transmission. This course will use Matlab/Simulink simulation for student projects and homework. NOTE: Students cannot earn credit for both ECE 4722 and ECE 5722.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5732. Electric Machines and Drives. 3 Credit Hours.**

Fundamentals of electromechanical energy conversion, electric drives and systems. Transformers, DC machines, synchronous machines, induction motors, dq-transformation, vector control of induction motors, reluctance motors, single phase motors, brushless dc motor. Introduction to power electronics and their applications in power drives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 5742. Power Converter Modeling and Control. 3 Credit Hours.**

This course introduces modeling and control methodologies of modern power electronic systems and their applications. The course covers modeling of DC-DC, DC-AC, AC-DC and AC-DC-AC power electronic converters, conventional and advanced control diagram design of power converters, interactions among multiple converters in power electronics dominated systems. Also industrial and grid-level applications of these technologies will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (ECE 5722 or ECE 4722)

**ECE 5752. Power Electronics Design and Testing. 3 Credit Hours.**

This course focuses on the design and testing perspectives of power electronics technologies. Particularly, the course introduces the popular software environment for power electronics testing and introduces the detailed steps and procedures of power electronics simulation model development. The course emphasizes topology, modulation, and control of power electronic converters, and also highlights some selected applications for simulation testing. Lab sessions will also be arranged for hardware testing of power electronics technologies. The major goal of this course is to let the students know how power electronic converters are used and tested in real-world applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in ECE 5722.

**ECE 5826. Information Theory. 3 Credit Hours.**

Information Theory is a field that has been central to the development of modern communications and computing technologies. The goal of this course is to provide the student with a thorough understanding of the concepts of entropy and information, and how to apply these to real world problems such as speech recognition, language engineering, signal compression, and financial modeling. A secondary goal is to develop a mathematically rigorous understanding of methods for measuring and manipulating various measures of information in signals and systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECE 3522.

**ECE 5999. Research Experience in Electrical Engineering. 0 Credit Hours.**

Research Experience provides graduate students laboratory experiences/research practices prior to undertaking independent, directed, master project, master's thesis, or dissertation research. This course allows graduate students the opportunity to learn the use of laboratory equipment, designing and carrying out an experiment(s), collecting preliminary data, field experiences, and participation in laboratory meeting, etc. with faculty which may lead to identifying a faculty mentor. The course will be graded Pass (P) or Fail (F). The Research Experience is a non-repeatable course. After the completion of ECE 5999 - Research Experience in ECE, students will need to be enrolled in independent study, directed research, master's research, master's thesis, dissertation proposal, or dissertation if they continue in an active research program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 8110. Special Topics in Electrical and Computer Engineering. 3 Credit Hours.**

Selected advanced topics in various major research areas under electrical and computer engineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 8324. Mixed Signal VLSI Design. 3 Credit Hours.**

Basic MOS device physics, single state amplifiers, frequency response, op amps, switched capacitor circuits, short-channel effects, amplifier design for wireless communication, low power static RAM architectures, layout and packaging.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 5324.



**ECE 8334. Nano Applications, MEMS & NEMS. 3 Credit Hours.**

Nano challenges, quantum mechanics, nano materials, nanolithography, optics, carbon nanotubes, GaNa nanotechnology, MEMS and NEMS Architectures, Mathematical Model of MEMS and NEMS, Applications of Nanotechnology: Bio-Medical applications, Optical Devices, Sensors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 5324.

**ECE 8412. Optimal and Robust Control. 3 Credit Hours.**

Concept of optimality, calculus of variations, Euler-Lagrange equation, Pontryagin's minimum principle, Bellman's equation, Kalman filter, uncertainties in physical systems; structured and unstructured uncertainties; application of the Lyapunov method to robust control problems; robust optimal control; state space design for finite and infinite horizon problems; H-infinity design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 5412.

**ECE 8414. Adaptive Control. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 8512. Signal Processing and Communication Theory. 3 Credit Hours.**

Coherent and non-coherent detection of binary and M-ary signals in noise; waveform coding, linear block coding; convolutional, cyclic and turbo codes; error probability and bandwidth-efficiency plane in the design of digital communications systems; multipath and fading channels; simulation of communication systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (ECE 5512 and ENGR 5033)

**ECE 8514. Applications in Digital Signal Processing. 3 Credit Hours.**

FIR and IIR digital filter design, finite word length effects, filter banks, multirate signal processing, spectral analysis (classical, modern, parametric and nonparametric techniques), adaptive filtering (Wiener filter theory) and speech production, analysis, and processing tools and speech coding. Computer experiments using MATLAB will be an integral part of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 5033.

**ECE 8516. Design and Performance of Communication Networks. 3 Credit Hours.**

An overview of the technologies, architectures and protocols used to build high-speed communication networks. Design and performance analysis techniques for computer communication networks. Topics will include: design and performance analysis of wired and wireless local networks, sensor networks, and Internet. Projects will include developing stochastic models, queuing analysis, and simulations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 8524. Speech Signal Processing. 3 Credit Hours.**

Spectral analysis of non-stationary signals, short-time Fourier transform, homomorphic filtering and filter bank, Speech compression, and synthesis techniques. Weiner filtering for speech enhancement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 8514.

**ECE 8525. Fundamentals of Speech Recognition. 3 Credit Hours.**

This course introduces students to the theory and implementation of modern day speech recognition systems. We begin with a review of pattern recognition and machine learning, including topics such as Gaussian mixture models and Bayesian models. We then discuss the three main components of a speech recognition system: feature extraction, acoustic modeling and language modeling. We conclude the course with an overview of state of the art systems. Students will learn how to simulate and evaluate complex machine learning algorithms such as hidden Markov models and neural networks. Data-driven methodologies will be emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ENGR 5022 and ENGR 5033.

**ECE 8526. Information Theory. 3 Credit Hours.**

Information Theory is a field that has been central to the development of modern communications and computing technologies. The goal of this course is to provide the student with a thorough understanding of the concepts of entropy and information, and how to apply these to real world problems such as speech recognition, language engineering, signal compression, and financial modeling. A secondary goal is to develop a mathematically rigorous understanding of methods for measuring and manipulating various measures of information in signals and systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ENGR 5022 and ENGR 5033.

**ECE 8527. Introduction to Machine Learning and Pattern Recognition. 3 Credit Hours.**

Pattern recognition theory and practice is concerned with the design, analysis, and development of methods for the classification or description of patterns, objects, signals, and processes. At the heart of this discipline is our ability to infer the statistical behavior of data from limited data sets, and to assign data to classes based on generalized notions of distances in a probabilistic space. Many commercial applications of pattern recognition exist today, including voice recognition, fingerprint classification, and retinal scanners. Recent developments in statistical modeling using Bayesian techniques, neural networks, decision trees, fuzzy logic, and syntactic structures have accelerated the growth of pattern recognition applications. The objective of this course is to introduce fundamental methods of pattern recognition, both statistical and neural, with examples from several application areas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ENGR 5022 and ENGR 5033.

**ECE 8528. Advanced Topics in Statistical Modeling for Engineering Applications. 3 Credit Hours.**

This course builds on a basic knowledge of machine learning and reviews recent advances in the field. It is a research-oriented course intended to complement a student's thesis or dissertation research. The course will focus on a selection of emerging machine learning algorithms and analyze contemporary publications on these techniques. The emphasis will be on algorithms suited to large, complex data sets. Both supervised and unsupervised learning methodologies will be discussed. Applications will be drawn from several signal processing disciplines including speech, image and bioengineering applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ENGR 5022, ENGR 5033, and ECE 8527.

**ECE 8529. Fundamentals of EEG Processing. 3 Credit Hours.**

Electroencephalography (EEG) records electrical activity along the scalp, measuring spontaneous electrical activity of the brain. The signals measured along the scalp can be correlated with brain activity, which makes it a primary tool for diagnosis of brain-related illnesses. EEG specialists review these waveforms and develop a diagnosis. EEGs traditionally have been used to diagnose epilepsy and strokes. Other common clinical uses have been for diagnoses of coma, encephalopathies, brain death and sleep disorders. EEGs are increasingly being used to diagnose head-related trauma injuries and Alzheimer's disease. Hence, there is a growing need for expertise to interpret EEGs and, equally important, to understand how these conditions manifest themselves in the EEG signal. In this course we will discuss the techniques neurologists use to manually interpret EEGs. A vast archive of clinical EEG recordings will be studied. Since EEG signals are very low-level electrical signals, we will then discuss digital signal processing that is used to convert the raw electrical signals into visualizations that can be readily interpreted. We will also introduce machine learning techniques that are used to automatically interpret and transcribe these signals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ECE 8622. Advanced Computer Architecture. 3 Credit Hours.**

Advanced course in the design and analysis of computer architecture. Topics will include instruction level parallelism, digital signal processors, network processors and multi-microprocessors. Projects will focus on the design, design analysis and FPGA implementations of computing systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 5322.

**ECE 8712. Power Systems Operation and Control. 3 Credit Hours.**

The emphasis of this course is on computational issues that arise in the analysis and solution of the large-scale operations and control problems in actual power systems. Topics include power flow analysis, contingency analysis, security analysis, load forecasting, economic dispatch, unit commitment, optimal power flow, state estimation, and bad data detection, etc. Additional topics for real time control of power system include substation automation, EMS system architecture, distribution management system (DMS), RTU's and PMU's, and situational awareness and visualization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECE 5712.

**ECE 8722. Applications of Advanced Power Electronics Technologies. 3 Credit Hours.**

In this course, we will start from the basic components and operation principle of power electronic converters and their advanced applications in modern power systems. In particular, the following topics will be included: converter topologies used for grid applications, converter control approaches, AC and DC microgrids, converter interfaced energy storage systems, smart inverters in distribution automation, etc. Applications of power electronic devices and systems used in modern power systems will be presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ECE 5722.

**ECE 8742. Power System Stability. 3 Credit Hours.**

This course introduces advanced concepts on stability and control of power systems. State space concepts of stability and control of dynamic systems are reviewed. Mathematical models of synchronous and induction machines are developed using Park's transformation. The method is extended to modeling converters, inverters, multimachine power grid, and AC/DC microgrid. Power system stability concept is introduced starting with the swing equation and extended to the analysis of multimachine systems. Advanced control methods of induction motors using vector control are discussed. The course includes extensive Matlab simulation studies of power grid and its components.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in ECE 5412 and ECE 5712.

**ECE 9182. Independent Study I. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by MS/MSE students and once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 9282. Independent Study II. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 9324. VLSI Physical Design. 3 Credit Hours.**

This course provides a comprehensive background in the principles and algorithms of VLSI physical design. The algorithms are presented in an intuitive manner so that the student can concentrate on the basic idea of the algorithms. The students are provided enough details to implement the algorithms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 8324 and ECE 5324.

**ECE 9412. Nonlinear Control System. 3 Credit Hours.**

Modeling of nonlinear systems, types of nonlinearity; Phase Plane Analysis, construction of phase portrait, limit cycle, saddle point; Existence and uniqueness of solutions, sensitivity; Lyapunov Stability, region of attraction, construction of Lyapunov functions; Perturbation Analysis variation of parameters, Method of averaging, Describing Functions, frequency domain analysis; Sliding Mode Control, sliding surface; Feedback Linearization, Lie algebra, state and output linearization, applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 8412.

**ECE 9512. Detection, Estimation, and Modulation Theory. 3 Credit Hours.**

Signal detection and estimation in white and non-white noise, MAP estimation, applications in data and telecommunications. Wiener and Kalman-Bucy filters, linear and non-linear modulation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ENGR 5033.

**ECE 9514. Adaptive Signal Processing. 3 Credit Hours.**

Adaptive filter techniques such as Weiner filter, Linear Prediction, Least-Mean-Square, Recursive Least-Squares, Kalman Filtering algorithms. Introduction to the application of adaptive filters to communications, control, and speech processing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (ECE 5514 and ECE 8514)

**ECE 9524. Digital Image Processing. 3 Credit Hours.**

P2D digital filters, digital image edge detection and segmentation, feature extraction, deblurring, wavelet transforms, JPEG image compression, Fourier optics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 8514.

**ECE 9622. Parallel Processing Architectures. 3 Credit Hours.**

This course provides an in-depth study of the design, engineering, and evaluation of modern parallel computers. Design issues covered include: naming, replication, synchronization, latency, overhead, and bandwidth. Other topics include scalable multiprocessors and interconnection network design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ECE 8612.

**ECE 9991. Directed Research. 1 to 6 Credit Hour.**

Under the guidance of a faculty member, students will select a topic in electro-technology to be researched using at least five references. An extensive research paper must be submitted which will be reviewed by two faculty members. The project report must also be presented at an open seminar. Projects related to industrial applications are encouraged. For non-thesis students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have completed their coursework but who have not yet passed both the Ph.D. Preliminary Examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 9995. Project. 1 to 3 Credit Hour.**

Under the guidance of a faculty member, students will select a topic in electro-technology to be researched using at least five references. Student present the research at an open seminar, and submits an extensive research paper, which will be reviewed by two faculty members. Projects related to industrial applications are encouraged. For non-thesis students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 9996. Thesis. 1 to 3 Credit Hour.**

Under the guidance of a faculty member, students will select a topic in electro-technology, and conduct research leading to submission and oral presentation of a thesis proposal and the final defense of the thesis. For thesis students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have passed both the Preliminary and Qualifying Examinations but who have not been elevated to candidacy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ECE 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is intended only for those students who have achieved Ph.D. Candidacy status. A minimum of 6 semester hours is required for graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Elementary Education (ELED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ELED 9789. Field Experience in Supervision. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Emergency Medicine (EMMD)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**EMMD M175. Introduction to Clinical Reasoning. 0 Credit Hours.**

This elective will allow students to practice their clinical reasoning skills by working through difficult cases gathered from the instructors' clinical experience as well as cases from popular TV shows and other types of media. We will go through the process of building a differential diagnosis and practice using online resources to find the answer to difficult questions. Special emphasis will be put on Emergency and Critical Care cases, but we will also discuss different clinical reasoning strategies for a variety of clinical situations. During this course, we will also be working together to solve real patient cases through CrowdMed, an online database for unsolved medical mysteries. This website allows patients with unsolved medical problems to present their own cases and ask for help from the medical community. You will become a "Medical Detective" and submit possible diagnoses to help patients get answers about their medical problems that have stumped their own physicians. We will break students up into teams, each led by one of the resident facilitators, to see who can help the most patients by solving their cases!

**Repeatability:** This course may be repeated for additional credit.

**EMMD M190. Intro to Emergency Medicine. 0 Credit Hours.**

**Course Attributes:** M5

**EMMD M191. Wilderness Medicine. 0 Credit Hours.**

We would like to provide the opportunity at LKSOM for students to explore the field of Wilderness Medicine (WM) early in their medical education in the form of a structured elective. This elective is designed for 1st and 2nd year medical students, with a goal of providing an introduction to the field of WM and environmental medicine while gaining hands-on experience and exposure to skills required for expedition planning, rescue, and wilderness survival. We will create an interactive learning environment where students can learn and practice under the supervision of faculty with experience and training in WM. The Wilderness Medical Society, a CME-accredited resource for academic WM, offers course materials for student electives that we will utilize in the design of this elective.

**Repeatability:** This course may be repeated for additional credit.

**EMMD M199. Point of Care Ultrasound. 0 Credit Hours.**

Point of Care Ultrasound has become an indispensable skill in the evaluation and treatment of patients across the broad spectrum of medicine. Its utilization allows for timely diagnoses, as well as safe and effective treatment. This elective will introduce the fundamentals of ultrasound and the basics scans over seven sessions throughout the semester. The format will include an initial lecture followed by hands-on ultrasound training in the simulation lab.

**Repeatability:** This course may be repeated for additional credit.

**EMMD M401. Emergency Medicine Teaching Elective. 0 Credit Hours.**

Students will help with the summer work-study students. They will be involved with organizing their schedules, assisting them in the ED, developing cases, giving lectures. This will enhance their teaching abilities, as well as their communication skills in working with other students and healthcare workers.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in EMMD M403.

**EMMD M402. Emergency Medical Services. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**EMMD M403. Emergency Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**EMMD M404. Advanced Emergency Medicine. 0 Credit Hours.**

This elective is for 4th-year students only. It is a 4-week elective during which students will be expected to perform at the sub-internship level. They will be responsible for evaluating and managing the undifferentiated and acutely ill patients that present to the emergency department (ED). Working alongside senior residents and attendings, students will take primary responsibility for their patients. They will be expected to perform a focused history and physical exam, develop a differential diagnosis, and create/implement a treatment plan. They will assist in procedures, as well as consultations and the dispositioning of their patients. The students will complete 10-12 clinical shifts while also participating in specialized days where they are introduced to the various fellowship opportunities in the field of Emergency Medicine. These sessions will include a day of focused ultrasound training, EMS operations, and toxicology care. The students will also participate in simulation sessions and procedure labs throughout the rotation. At the closure of the elective, the students will give a 15-minute oral presentation on an interesting case from a patient encounter during their time in the ED. The presentation will include at least two educational pearls regarding that topic. They will receive mid-rotation and end-of-rotation feedback. The standard end-of-shift evaluation EM card will be utilized to assess daily progress and grading. This course will be graded Honors, High Pass, Pass, Fail.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in EMMD M403.

**EMMD M413. Emergency Medicine Health Equity Elective. 0 Credit Hours.**

Students will build their skills, experience and understanding of issues related to health equity and their manifestations in the emergency department. Students will explore social and structural determinants of health, health disparities, and the various levels of intervention to address them. They will acquire new vocabulary to describe the challenges faced by historically marginalized communities. Students will spend clinical time in the emergency department with a focus on how issues of health equity impact patient care. They will also spend time in alternate care settings, including the addiction medicine service, the Begin the Turn mobile unit, and at local community organizations to better understand the role of various stakeholders invested in addressing the challenges and opportunities in North Philadelphia. Students will attend didactic and interactive presentations given by Temple emergency medicine residents and faculty on social emergency medicine topics, and complete asynchronous work and an independent presentation on a related topic of their choice.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in EMMD M403.

**EMMD M424. Bedside Ultrasonography. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**EMMD M433. Medical Toxicology. 0 Credit Hours.**

Rotation may be two or four weeks, depending on rotator preference and residency requirement. Vacations may not be taken during two-week rotations. All rotators to be available M-F 8a-5p to see all patients with attending at bedside or via telemedicine. At least two additional calls per week 5p-9p and one full weekend day per rotation. Bedside consultations occur only at Bethlehem, Anderson, Allentown, and Warren. Rotators will be conferenced into calls with toxicologist when on call. Telemedicine is available at the toxicologist's discretion for any campus and rotator will be expected to have Microsoft Teams app downloaded to computer or phone in order to participate. Consultation notes to be written by resident on Bethlehem and Allentown patients seen at the bedside using template: toxadultconsult.

**Repeatability:** This course may be repeated for additional credit.

## Engineering (ENGR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ENGR 5011. Engineering Mathematics I. 3 Credit Hours.**

This is a survey course in essential mathematics for first-year graduate students in engineering and physical sciences. Topics include analytic methods in ordinary differential equations, complex-variable theory, the laplace transform and its inversion, and initial-value problems and boundary-value problems. Matlab, numerical methods, and introductory numerical algorithm design are introduced.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5012. Engineering Mathematics II. 3 Credit Hours.**

This is a survey course in classical numerical and analytical methods for partial differential equations, for first-year masters and doctoral students in engineering and physical sciences. Topics include analytic methods and numerical methods for partial differential equations in cartesian and non-cartesian coordinate systems, and an introduction to perturbation theory. The course will emphasize quantitative analysis, and assignments will entail computational algorithm design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5022. Engineering Analysis and Applications. 3 Credit Hours.**

Vector space, basis, projection, null space, function space, L2 and space of continuous functions, Hilbert space, orthogonality, generalized Fourier series, linear transformation, adjoint transformation, eigenvalue problem, linear functional, Gateaux and Frechet differential, constrained optimization, infinite dimensional systems, complex analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5031. Engr Prob Stats Stoc Met. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5032. Probability, Statistics, and Stochastic Methods. 3 Credit Hours.**

A balanced approach to probability, statistics, stochastic models, and stochastic differential equations with special emphasis on engineering applications. Random variables, probability distributions, Monte Carlo simulations models, statistical inference theory, design of engineering experiments, reliability and risk assessment, fitting data to probability distributions, ANOVA, stochastic processes, Brownian motion, white noise, random walk, colored noise processes. Differential equations subject to random initial conditions, random forcing functions, and random parameters. Partial differential equations subject to stochastic boundary conditions. New techniques for non-linear differential equations. Computer simulation with MAPLE and other symbolic algebra software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5033. Probability and Random Processes. 3 Credit Hours.**

Sets and events, Random variables, Distribution and density functions, Functions of multiple random variables, Moments and conditional statistics, Information entropy, stochastic processes, wide-sense stationary process, ergodicity, correlation, and power spectrum of stationary processes. Applications to sampling theory and signal modulation and detection.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5110. Special Topics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 5116. Spacecraft Systems Engineering. 3 Credit Hours.**

The concept of systems engineering is introduced using a satellite application. Systems engineering is a top-down approach to the design, implementation, testing, and deployment of large-scale systems to meet the needs of users. The topics will include systems engineering methodology, dynamics of spacecraft, and celestial mechanics. This course will also introduce the notion of invention and innovation, and how they are related to the intellectual property issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**ENGR 5117. Experimental Methods. 3 Credit Hours.**

Application and design of experimental techniques and measurement systems used in engineering laboratories. Introduction to the DMM, digital scope, and computer-based data acquisition systems for measurements of force, motion, pressure, temperature, and flow in steady and unsteady systems. Data transmission, data analysis and presentation, and computer interfacing techniques. Statistical methods and uncertainty analysis. Hands-on experience with state-of-the-art instrumentation systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5121. Design of Experiments. 3 Credit Hours.**

The practice of modern science and engineering is synonymous with the ability to plan, design and conduct experiments efficiently and effectively, and analyze the resulting data to obtain objective conclusions in applications ranging from new product design and development to phenomenological/basic science studies. In this course we will focus primarily on methodological and design issues in planning experiments rather than on statistical analysis of the data. Nevertheless, we will briefly review various statistical analysis approaches required for fully designed experiment. Case studies involving single factor experiments, factorial designs, manipulation checks, etc. will be used to develop hands on skills for designing your own experiments. The course will have a focus on engineering approach to design of experiments with a particular emphasis on problem definition, system identification, data collection, statistical analysis, and hypothesis testing. For the final project, you will prepare a fellowship or grant (e.g. NSF GRFP or AHA Predoctoral) application ready for submission to a funding agency.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5201. Multiscale Design of Materials and Structures. 3 Credit Hours.**

All materials and structures have a multiscale nature spanning from atoms to molecules, microstructures, and finally to structures with real-world functionality and applications. This course is important for a comprehensive and project-based understanding of computational techniques that enable high-fidelity, simulation-driven design across multiple length scales. Students will learn the theory and practice of several computational techniques including molecular dynamics, micromechanics, and structural optimization. Students will apply computational tools to extract material properties based on atomic structures or microstructures, design atomic structures or microstructures of materials to achieve desired properties, and optimize engineering structures based on material properties fed from lower-scale calculations. Students will become independently competent in atomistic modeling and simulation of fluids and solids, microstructural analysis and design of hybrid composites and structured materials, and the optimal design of engineering structures for maximum performance and weight savings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5314. Continuum Mechanics. 3 Credit Hours.**

This course covers tensors, kinematics of a continuum, stress, integral formulations, linear isotropic elastic solid, and an introduction to Newtonian Fluid (CLO 3).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5334. Dynamical Systems. 3 Credit Hours.**

This course focuses on the algebraic and differential equations governing the static and dynamic 3D motion of 3D bodies, including vectors, vector differentiation, and dyads. The equations of motion for multibody systems will be derived using Newton-Euler, Lagrange, and Kane's methods. Computational tools for 3D force and motion analysis will be used to simulate physical systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5511. Fluid Dynamics. 3 Credit Hours.**

Navier-Stoke's equation, Laminar and turbulent flow, boundary layer phenomena, compressible fluid flow including isotropic flow, shock waves, friction flow, and flow with heat transfer.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 5576. Computational Fluid Dynamics. 3 Credit Hours.**

This course introduces the fundamentals of numerical solution methods for thermal and fluid dynamics applications. Focus is placed on the development of explicit and implicit methods for solving linear and nonlinear partial differential equations for heat conduction, wave propagation, and potential flow. Important topics pertaining to the use of commercial and research grade CFD software are included. As a final course objective, students will develop a solution method for 2D incompressible flow using MATLAB or a similar programming environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENGR 8110. Special Topics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9182. Independent Study I. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by MS/MSE students and once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9185. Experience in Engineering Profession I. 1 to 3 Credit Hour.**

This course involves work experience in industry on current industrial practices of advanced engineering concepts under the supervision of a faculty advisor and an industrial mentor. At the end of the internship period, the student submits a technical report that is suitable for general public release. The report is graded by the faculty advisor in consultation with the industrial mentor. Students already employed in the industry are not eligible to register for this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9282. Independent Study II. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9285. Exper Engineer Prof II. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9990. Engineering Seminar. 1 to 3 Credit Hour.**

Students present their research results at an open seminar. The seminars may be arranged on a biweekly basis over the semester. Active participation of all graduate students is expected.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9991. Directed Research. 1 to 6 Credit Hour.**

Under the guidance of a faculty member, the student will conduct independent research on a selected topic in engineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have completed their coursework but who have not yet passed both the Ph.D. Preliminary Examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9995. Project. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9996. Thesis. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have passed both the Preliminary and Qualifying Examinations but who have not been elevated to candidacy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENGR 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is intended only for those students who have achieved Ph.D. Candidacy status. A minimum of 6 semester hours is required for graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Engineering Management (EMGT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**EMGT 5631. Design Thinking. 1.5 Credit Hour.**

Many technologists view design as a function that takes place after the product or solution has been developed. Design thinking offers an alternative, customer driven approach to the commercialization of technological innovation, which embeds potential customer usage patterns into the development from the outset. Design thinking is thus a radical approach to the design process that enables much higher levels of innovation (and therefore commercial success) into the design process, especially in comparison with the traditional view of design that tends to foster incremental thinking. In this course we will share case studies of successful and unsuccessful product design, and provide participants with a series of tools to help them understand and deploy a design thinking process. In the course we will share frameworks for identifying market and technology trends that can stimulate opportunities for radical designs based on user engagement. With an improved understanding of the design thinking process participants will be better prepared for commercial success, whether they work in a large company deploying new solutions, or are interested in starting their own venture. The course will place particular emphasis on the importance and role of experimentation and learning from failure, as well as provide access to a series of tools that can help an organization decide whether, or not, to continue with a specific development process. In this course, students learn theories and practices for innovation, tools and methods for design inquiry, and characteristics of "design attitude." The course emphasizes hands-on project and studio-style project works.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5632. Intrapreneurship: Managing the New Product Development Process. 3 Credit Hours.**

The course is designed to give technology students insights into the market and commercial factors that should be considered when developing new products or technologies. This course offers students the chance to understand and apply a number of analytical, decision making, and planning tools that can be used to guide the development of new products (and services) from idea to the marketplace (invoice). The course highlights critical issues associated with linking business objectives to technology development, and how each influences the other. Specific topics addressed include: the development of new product strategy and policy, selection of product market strategies, deployment and application of new product development processes, portfolio management, product development tools and metrics, market research, and importantly the people and organizational issues associated with the product development process. Participants in the course will learn to appreciate the advantages of introducing more formal new product development processes that break down the overall process into stages, and understand how and why the consideration of different strategic, technical and financial issues at each stage improve the likelihood of long-term commercial success. Not only will the course prepare participants for an active role in the product development process in a large organization or to participate in the technology development process in a new venture, they will also be prepared to obtain a certificate as a New Product Development Professional (NPDP) Certification offered by the PDMA.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5633. Management Principles for Innovators, Engineers and Technologists. 3 Credit Hours.**

This is an introductory course for engineers and technologists who have no formal business training. It includes an introduction to the theory of the firm and the principles of management. It includes looking at the evolution of management, and the new roles for leaders and managers in innovative organizations. The course also gives a basic overview of corporate finance, and explains the various components of balance sheets, profit and loss and cash flow statements. Finally, the course deals with basic human resource and people management issues in the contexts of large organizations trying to adapt to rapid changes in the market.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5634. Project Management Overview and Project Management Essentials. 1.5 Credit Hour.**

This course is designed for individuals working in both large and small organizations who are often faced with the challenges of managing multiple priorities and projects with limited resources. Whether these projects include a research and development project, the opening of a new production line, or the construction of a new facility, individuals are accountable for their on-time and on-budget performance. This course is an introduction course and follows a life-cycle approach to managing projects, beginning with project initiation concerns and ending with project termination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5635. Financial Management for Technologists. 1.5 Credit Hour.**

This course provides students with a real world understanding of what the key financial reports of a company actually mean and what is really important as a manager. It focuses on understanding profit and loss statements, budgets and cash flows. Also, it examines various methods for calculating financial return, and provides tools to help participants better budget, track project costs and decide between project alternatives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5636. Lean Six Sigma and the Science of Improvement. 3 Credit Hours.**

The discipline of quality management is increasingly recognized as an essential element in the management of any company. Quality management provides a number of approaches and tools to help individuals in both large and small organizations ensure that products and solutions consistently meet and exceed customer expectations, while ensuring that the company's processes maximize operational efficiency. In this course we will introduce a number of quality management tools: Six-Sigma, kaizen and TQM, that participants will be expected to deploy on actual cases. In addition, students will be provided with an overview of statistical tools that are essential when deploying a quality management system (i.e. Pareto Analysis, correlations and regression). The course will also focus on developing appropriate measurement systems, in order to use quantitative as well as qualitative tools to help identify specific areas that need attention. This will help quantify the magnitude of identified problems, prioritize the sequence in which each is going to be addressed, and then measure improvements made. The course is essential to those operating in larger companies, but the tools deployed will be useful to anyone looking to improve the effectiveness and efficiency of a smaller business, including those running their own ventures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5637. Marketing Technological Products and Services. 1.5 Credit Hour.**

This course applies the theories and constructs of marketing to the challenges of marketing technological products and services to organizational buyers. A firm's marketing initiatives can directly impact firm revenues (and costs), and ultimately firm value. It is therefore essential that managers understand the process of developing and managing marketing strategy (target market selection and customer value proposition). This course provides insight into marketing programs (product, promotion, place, and pricing), and describes how those programs can be integrated to yield a superior customer value proposition. A focus on technological products and business-to-business customers will be maintained throughout the course. Various pedagogical methods are utilized, including lectures, case studies, in-class presentations, and group projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5638. Executive Engineering Leadership. 1.5 Credit Hour.**

This is an eclectic, interactive course aimed at facilitating technology professionals for the development of a deeper understanding of selected topics that contribute to heightened self-awareness as the foundation for a higher level of personal and executive development and effectiveness. The course examines the inter-relatedness between leadership and management, cognitive and affective aspects of executive behavior and managerial decision-making. It includes topics such as individual self-analysis of leadership style, communications skills, personal goals and values, interpersonal skills, team-building, negotiation skills, conflict management and group dynamics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EMGT 5633 (may be taken concurrently)

**EMGT 5639. Advanced Financial Management for Technologists. 1.5 Credit Hour.**

This course is a continuation of EMGT 5635 and studies problems in planning, controlling, and directing engineering through the perspective of financial analysis. The course will exam the constructs of profitability, liquidity, and the organizational structure of the engineering function using financial analysis and forecasting. Financial techniques will be applied to adjust engineering operations to meet the organization's total financial position and goals. Various pedagogical methods are utilized, including lectures, homework and quiz assignments, exams, and a team financial analysis project of technology based organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EMGT 5635 (may be taken concurrently)

**EMGT 5642. Project Management - Project Planning, Implementation and Case Study. 1.5 Credit Hour.**

This course follows EMGT 5634 and includes project planning and scheduling which are given the most emphasis, making use of the PERT and CPM approaches. A course project is required. This course is designed to provide simple project management tools to help participants define project scope, agree on project milestones and track project performance. For individuals with multiple projects, learning these project management techniques is both an essential way of assigning priorities and increasing the likelihood of good performance, and in communicating with project participants and other stakeholders to allocate responsibilities and monitor outcomes. This course will provide participants with a number of project management tools and the opportunity to deploy them on case studies, in order for them to learn which tools are most appropriate for a specific application. In addition, the experience of using project management tools will help them to make sure they establish the groundwork for success when taking on new projects. Participants in this course may also gain credits for certification from the Project Management Institute (PMI).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in EMGT 5634 (may be taken concurrently)

**EMGT 5645. Fundamentals of Interpersonal Leadership for Technologists. 1.5 Credit Hour.**

This is an introductory course for engineers and technologists who have no formal business training. The course deals with basic human resource and people management issues in the context of large organizations trying to adapt to rapid changes in the market.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EMGT 5646. Fundamentals of Team Leadership. 1.5 Credit Hour.**

This is an introductory course for engineers and technologists who have no formal business training. The course deals with the formation and leadership of teams in the contexts of large organizations trying to adapt to rapid changes in the market.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in EMGT 5645 (may be taken concurrently)

**EMGT 8110. Special Topics in Engineering Management. 1.5 to 3 Credit Hour.**

Selected topics in Engineering Management. Please consult with instructor for detailed description.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EMGT 9682. Independent Study in Engineering Management. 3 Credit Hours.**

The Independent Study course will allow students to work on a relevant project in the field of Engineering Management under the direct supervision of faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EMGT 9995. Capstone for Engineering Management. 3 Credit Hours.**

The Capstone course will allow students to complete final projects in their Engineering Management program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## English (ENG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ENG 5001. Introduction to Graduate Study in English. 3 Credit Hours.**

This course offers practice in a variety of written genres vital to professional life in higher education: the abstract, the proposal, the conference paper, the review, and the writing sample. It also requires students to learn (and intervene in) at least one critical debate. The course is designed to help professionalize graduate students who wish to pursue an academic job by teaching the tools and methods of literary scholarship, including library/database skills, archival research, historical research, critical theory, and textual editing. However, as a history and study of the profession, it should also be helpful to those wishing to learn how institutions of higher education operate and better understand the stakes and stakeholders who are committed to continuing humanities education. In addition to the writing assignments already mentioned, students will be asked to complete several shorter assignments, including an archive report, an institution report, interviews, and an annotated bibliography.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENG 5011. Early British Literature. 3 Credit Hours.**

Topical readings that emphasize pre-Renaissance literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5012. Early American Literature. 3 Credit Hours.**

Topical readings that emphasize American literature and criticism prior to 1800. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5014. 16th and 17th Century British Literature. 3 Credit Hours.**

Topical readings that emphasize Renaissance and/or Restoration literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5016. 18th Century British Literature. 3 Credit Hours.**

This course surveys major literary figures and representative literary forms of the 18th Century. We will consider literature's relation to political, social, and cultural developments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5018. 19th Century British Literature. 3 Credit Hours.**

Topical readings that emphasize Romantic and/or Victorian literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5021. 19th Century American Literature. 3 Credit Hours.**

Topical readings that emphasize nineteenth-century American literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5022. 20th and 21st Century British Literature. 3 Credit Hours.**

Topical readings that emphasize British literature and criticism since about 1900. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5024. 20th and 21st Century American Literature. 3 Credit Hours.**

Topical readings that emphasize American literature and criticism since about 1900. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5026. Anglophone Literatures. 3 Credit Hours.**

Topical readings that emphasize writing in English from African, Australia, the Caribbean, India, and other places besides Britain and America. Readings may include material from any time period. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5028. Literatures in Translation. 3 Credit Hours.**

Introductory readings that emphasize world literature and criticism from any time period. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5031. Translation Study. 3 Credit Hours.**

An introduction to the theory and practice of translation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5032. Book History. 3 Credit Hours.**

An introduction to the theory and practice of book history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5100. Topics - Literary Genres. 3 Credit Hours.**

An introduction to the characteristics and problems of genre. Readings may emphasize poetry, non-fiction prose, the novel, drama, biography, autobiography, or other topics related to genre. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5200. Topics - Literature and Culture. 3 Credit Hours.**

Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5300. Topics - Cinema and Media Arts. 3 Credit Hours.**

An introduction to cinema and media history and theory. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5301. Methods in Cinema and Media Studies. 3 Credit Hours.**

An introduction to ways of reading, writing on, and teaching film. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5401. Introduction to Digital Text Methods. 3 Credit Hours.**

This course introduces students to the technical and theoretical aspects of working with digital texts. Classes will consider the conceptual differences between digital and print forms of textuality, the relationship between methods of quantitative computational analysis and the discipline's historic focus on qualitative analysis, the logic of specific analytical tools, the history of computer-assisted textual analysis, and other theoretical problems inherent in thinking about digital texts. Typical topics may also include current text encoding methods, such as TEI; current textual data formatting for digital editions using XML; textual transformations, using XSLT or other programming languages; and specific computational methods of textual analysis, such as topic modeling, network analysis, and stylometry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**ENG 5500. Topics - Critical Theory. 3 Credit Hours.**

Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5501. History of Critical Theory. 3 Credit Hours.**

An introduction to critical schools from classical antiquity to the present.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5502. Current Directions in Critical Theory. 3 Credit Hours.**

An introduction to recent and/or contemporary critical theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5600. Special Topics in Creative Writing. 3 Credit Hours.**

A required course for MFA creative writing students. Special Topics in Creative Writing has both critical and creative writing components. The topic varies from year to year.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**ENG 5601. Poetry Workshop. 3 Credit Hours.**

Open only to students in the Creative Writing MFA program. Intensive discussion of student poetry and the work of established poets whose concerns are related to those of the students. Frequent individual conferences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5602. Fiction Workshop. 3 Credit Hours.**

Open only to students in the Creative Writing MFA program. Intensive discussion of student fiction and the work of established fiction writers whose concerns are related to those of the students. Frequent individual conferences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5603. Craft in Creative Writing. 3 Credit Hours.**

Focuses on craft elements of fiction or poetry. Content varies according to instructor and genre. Required course for M.F.A. candidates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5701. Composition Research Methods. 3 Credit Hours.**

An overview of current work in rhetoric and composition, and concentrated study in such areas as history of rhetoric, analyzing student texts, and evaluation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5702. Historical Studies in Language and Rhetoric. 3 Credit Hours.**

An introduction to historical study in language and/or rhetoric from classical antiquity to the present.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5710. Topics - Literacy and Language. 3 Credit Hours.**

Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5720. Topics - Rhetoric and Composition. 3 Credit Hours.**

Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 5811. Creative Nonfiction. 3 Credit Hours.**

An introduction to the study and practice of creative nonfiction in its various forms, including memoir, narrative journalism, arts and cultural criticism, and hybrid works. Students will read widely across the genre and respond critically to published texts, while also producing their own creative works and offering feedback on the work of their classmates. Students will discuss issues of craft - voice, style, structure, argument, etc. - but also the larger ethical and political questions raised by works in the genre. What should the relationship be, for instance, between creative nonfiction and various notions of truth? And how does the still-emerging genre of creative nonfiction define itself both within and against other established artistic forms? A final portfolio will be a mix of creative and critical work, developed and significantly revised over the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENG 5821. Literary Editing and Publishing. 3 Credit Hours.**

Students in this course will gain practical, hands-on editorial experience by collaborating to produce a literary publication. The specific publication project will vary from semester to semester, depending on the instructor and the availability of partner presses/publications, but may include: editing a special issue of an existing literary journal; editing a literary anthology for an established small press; managing the design and production process for a single-author book or chapbook; reading submissions and making editorial decisions for a literary contest. In addition to this central project, the class will be engaged in a study of the contemporary landscape for literary publishing. Students will read and write about literary journals and small presses, learning about the various communities these publications serve and how they work to connect writers and readers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENG 8101. Advanced Study - Early English Literature. 3 Credit Hours.**

Advanced study of topics in pre-Renaissance literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8102. Advanced Study - Early American Literature. 3 Credit Hours.**

Advanced study of topics in American literature and criticism prior to 1800. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8104. Advanced Study - 16th and 17th Century British Literature. 3 Credit Hours.**

Advanced study of topics in Renaissance and/or Restoration literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8106. Advanced Study - 18th Century British Literature. 3 Credit Hours.**

Advanced study of topics in Restoration and/or eighteenth-century British literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8108. Advanced Study - 19th Century British Literature. 3 Credit Hours.**

Advanced study of topics in Romantic and/or Victorian literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8109. Advanced Study - 19th Century American Literature. 3 Credit Hours.**

Advanced study of topics in nineteenth-century American literature and criticism. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8202. Advanced Study - 20th and 21st Century British Literature. 3 Credit Hours.**

Advanced study of topics in British literature and criticism since about 1900. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8204. Advanced Study - 20th and 21st Century American Literature. 3 Credit Hours.**

Advanced study of topics in American literature and criticism since about 1900. Readings may include material from other periods as well. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8205. Advanced Study - Anglophone Literature. 3 Credit Hours.**

Advanced study of topics in writing in English from African, Australia, the Caribbean, India, and other places besides Britain and America. Readings may include material from any time period. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8301. Advanced Study in Translation. 3 Credit Hours.**

Advanced study of topics in the theory and practice of translation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8302. Advanced Study in Book History. 3 Credit Hours.**

Advanced study of topics in the theory and practice of book history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8304. Advanced Study in Genre. 3 Credit Hours.**

Advanced study of topics in genre. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8402. Advanced Study in Cinema and Media. 3 Credit Hours.**

Advanced study of topics in cinema and media history, criticism, and theory. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8501. Advanced Study in Critical Theory. 3 Credit Hours.**

Advanced study of topics in critical theory. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8704. Advanced Study in Literacy and Language. 3 Credit Hours.**

Advanced study of topics in literacy and language. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8706. Advanced Study in Rhetoric and Composition. 3 Credit Hours.**

Advanced study of topics in rhetoric and composition. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8900. Advanced Study in Literature and Culture. 3 Credit Hours.**

Advanced study of topics in literary and cultural studies. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 8904. TU/Penn Exchange Poetics. 3 Credit Hours.**

One student a year is permitted to register for one course in poetics at the University of Pennsylvania. Any student admitted to the graduate program in English can apply to participate in the exchange program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENG 8985. Teaching in Higher Education: Writing. 3 Credit Hours.**

An introduction to the theory and practice of writing instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENG 9082. Independent Study. 1 to 6 Credit Hour.**

Independent study. By arrangement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9083. Master's Manuscript Tutorial. 3 Credit Hours.**

For Creative Writing majors. A tutorial in which the creative manuscript required for graduation is developed. Related readings. Weekly conferences. Two semesters are required.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: English.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9089. Rome Seminar in Art and Culture. 6 Credit Hours.**

For advanced undergraduate, graduate and post-doctoral students in fields such as literature, film studies, philosophy, art, and social theory. Graduate credit available. Summer session I.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9100. Seminar in Literary and Cultural Studies. 3 Credit Hours.**

Intensive reading and study of literary and cultural studies in a small class setting. Content varies. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9200. Seminar in Cinema and Media Studies. 3 Credit Hours.**

A seminar devoted to an exploration of a topic in media studies, such as a film or television genre, a national cinema, the work of a particular director or a critical and theoretical issue of current debate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9300. Seminar in Critical Theory. 3 Credit Hours.**

Intensive reading and study of critical theory in a small class setting. Content varies. Can be taken for more than one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9400. Seminar in Rhetoric and Composition. 3 Credit Hours.**

Intensive reading and study of rhetorical and/or composition in a small class setting. Content varies. Can be taken more than once for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Advanced seminar for doctoral candidates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9995. Master's Project. 1 to 6 Credit Hour.**

Creative thesis for M.F.A. candidates. Required for graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9996. Master's Essay. 1 to 6 Credit Hour.**

For doctoral candidates who select the M.A. option.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Registration required each semester after Preliminary Examinations while researching the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENG 9999. Dissertation Research. 1 to 6 Credit Hour.**

Dissertation research seminar for doctoral candidates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## English Education (Elementary) (ENEE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ENEE 8602. Teaching Literature N:6. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENEE 8604. Sem English Lang Ed N:6. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## English Education (Secondary) (ENES)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ENES 5641. Tchg Composition Sec Sch. 3 Credit Hours.**

Looks at four major aspects of teaching writing: writing as a cognitive process, the development of writing abilities, approaches to the teaching of writing, and evaluating writing. Attends both to writing reader-based prose such as exposition, argumentation, and persuasion and writer-based prose such as creative and journal writing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 5642. Tchg Literature Sec Sch. 3 Credit Hours.**

Designed for junior and senior high school teachers, the course focuses on theoretical framework, selection and organization of units of instruction, methods and materials appropriate for teaching literature. Attends to relating literature to learner needs, interests, and reading level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8623. Applied Ling for Eng Tch. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8624. Tch New Grammars-Sec Sch. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8641. Sem in Tchg Reading N-12. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8642. Tchg Appl of Sound Syst. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8645. Sem English Language Ed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 8652. Tchg Eng to Other Lang 1. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8653. Tch Eng Spk Other Lang. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8654. Issues in Eng Ed-S. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 8655. Seminar in Cur Pedagogy. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 8656. Sem in Class Research. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 8657. Seminar in Res & Tchg. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 8734. Discourse Analysis Tchrs. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8736. Theory Sec Lang Learn. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8742. Contexts/Literacy Dev. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 8744. Current Issues Lang Educ. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENES 9782. Special Projects Eng Ed. 1 to 12 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 9882. Grad Ind Study Eng Ed-S. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 9887. Seminar Pract in Commun. 3 to 6 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENES 9987. Seminar Pract in Commun. 3 to 6 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## **Environmental Health (ENVH)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ENVH 5004. Environmental Health. 1.5 Credit Hour.**

ENVH 5004 is a required foundational, introductory course for the MPH degree programs, and as such serves as an introduction to the various aspects of the Environmental Health field. The course incorporates not only the common concepts associated with environmental exposures (air, water, soil, food, etc.) but also legacy and emerging issues associated with environmental threats to human health, including the potential impacts of emerging contaminants on human health. The emphasis is on biological, chemical, and physical sources of exposures, their salient characteristics, potential effects on human and ecological health, and the modern responses (methods, actions, and policies) for limiting exposures and effects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 5013. Global Environmental Health. 3 Credit Hours.**

This is an intermediate-level graduate course for those interested in environmental health and global health. Other graduate students may attend the course with the instructor's permission, provided they meet the course prerequisites. This course does not meet the core requirement for environmental health in the MPH program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ENVH 5004 (may be taken concurrently), ENVH 5103, or PBHL 5103)

**ENVH 5305. Environmental Toxicology. 3 Credit Hours.**

This course reviews the absorption, distribution, metabolism, and excretion of environmental toxicants. Methods used to measure acute and chronic toxicity, including carcinogenesis, are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 5309. Water, Sanitation and Public Health. 3 Credit Hours.**

This is an intermediate-level graduate course for those interested in water, sanitation and hygiene and the implications on public health. Graduate students from the College of Public Health or from Engineering, Environmental Sciences or other related fields may attend the course with the instructor's permission. The course explores the importance of water, sanitation and hygiene on public health. The course is designed for the students to get hands-on learning about selecting and designing appropriate water and sanitation interventions as well as selecting methods for evaluating the public health impact of these interventions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 8016. Human Health Risk Analysis. 3 Credit Hours.**

This course is an introduction to the use of stochastic modeling to identify, assess, and manage environmental health hazards, risk assessment, and analysis through the lens of public health. Students will develop an understanding of the underlying sciences and mathematics that fall within exposure science and use Markov chain method to build exposure models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (EPBI 5002 (may be taken concurrently) or PBHL 5002 (may be taken concurrently))

**ENVH 8019. Environmental Policy and Regulation. 3 Credit Hours.**

This is an upper-level graduate course that focuses on the concepts of policy and regulatory systems meant for the protection and management of the environment in the United States, including the evolution of the regulatory systems and policy making process to address both legacy and emerging environmental issues and the factors that shape these policies and regulations. Emphasis will be placed on the development of the standards, enforcement, and compliance of selected federal environmental regulations and their equivalent enforcements at the state and local levels, and ultimately, how those regulations influence public health. The course might be of interest to those interested in understanding environmental policy and regulation in the U.S., identifying means to facilitate changes in environmental policy for human health and environmental protection, and how it provides foundation for other international policies and laws pertaining to environmental management and sustainability. Students may find this as an applied policy- and decision-making course. The course will bring in other experts, either in the form of team teaching or guest speakers, who will offer relevant and timely perspectives on topics of significant interest.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (PBHL 5005, SBS 5005, or HPM 5005) and (PBHL 5103 or ENVH 5103)



**ENVH 8207. Environmental Epidemiology. 3 Credit Hours.**

This intermediate course will cover selected topics in occupational and environmental epidemiology through a focus on specific health outcomes, such as non-malignant respiratory diseases, cancer, and musculoskeletal disorders, within the context of particular study designs or exposures. Students will have the opportunity to critically examine the current literature and to study contemporary issues in research. Exposure assessment, biomarkers, and emerging diseases within the context of the workplace and the environment will be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ENVH 5004 or ENVH 5103) and (EPBI 5201, PBHL 5201, EPBI 5101, or PBHL 5101)

**ENVH 8309. Exposure Assessment. 3 Credit Hours.**

Exposure assessment is the multidisciplinary field that identifies and characterizes exposure to environmental agents; develops estimates of exposure for epidemiology, exposure-response, trend and surveillance, and risk assessment studies; and evaluates the significance of exposure of effectiveness of intervention strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**ENVH 9289. MPH Fieldwork I. 3 Credit Hours.**

This course entails a fieldwork project or internship in a public health agency. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 5201, EPBI 5002, EPBI 5005, HPM 5006, SBS 5001, and EPBI 8012 (may be taken concurrently)

**ENVH 9389. MPH Fieldwork II. 3 Credit Hours.**

This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Epidemiology and Biostatistics (EPBI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**EPBI 5001. Biostatistics for Health Professions. 3 Credit Hours.**

This course is for graduate students in nursing and other health-related professions and is meant to teach students the common biostatistical tools used to analyze, present and interpret health-related data. The course will cover topics including data summary and visualization, descriptive statistics, sampling and confidence intervals, hypothesis testing, diagnostic tests, and inference related to t-test, ANOVA, simple and multiple regression, nonparametric tests and measurement agreements. Statistical processing through the program SPSS will be integrated into the program and used in tandem with critical principles needed for effective statistical decision making. At the conclusion of the course, students will be able to analyze real data sets and provide quantitative evidence to support scientific conclusions.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5002. Biostatistics. 3 Credit Hours.**

Students will review fundamentals of descriptive statistics, estimation, and hypothesis testing. More advanced influential methods will be introduced, including, but not limited to, regression and correlation and analysis of variance. At the conclusion of the course, students will be able to analyze real data sets and provide quantitative evidence to support scientific conclusions. The emphasis is on "doing" statistics utilizing sound statistical theory and relying on validated statistical software (SAS/SPSS) to produce descriptive statistics and inferential analyses, and interpret the results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5003. Spatial Analysis in Public Health. 3 Credit Hours.**

This course will create a methodological framework for approaching public health issues within the context of spatial investigations of health and disease, both internally via perceptual mapping, and externally via geographic information systems (GIS). This integrative discipline provides the opportunity for students to draw upon the concepts and techniques of sound public health and add a spatial perspective to their analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5005. Applied Analysis of Health. 1.5 Credit Hour.**

This lab course will focus on integrating concepts from biostatistics, epidemiology, environmental health, health policy, and social and behavioral health through hands-on data analysis and presentation techniques using SAS statistical software. Modules will also include SPSS and qualitative software. Labs will immerse students in applied exercises so they more fully understand the statistical principles presented in the co-requisite lecture course (EPBI 5002) as well become comfortable assessing available data and producing data-driven public health materials for various audiences. Each lab session includes exercises to help students more fully understand the statistical and analytic principles. It also re-enforces material covered in EPBI 5101, EPBI 5201, and EPBI 5002.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Co-requisites:** EPBI 5002.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101 (may be taken concurrently) or EPBI 5201 (may be taken concurrently))

**EPBI 5006. Biostatistics and Applied Analysis of Health. 4.5 Credit Hours.**

EPBI 5006 is an integrated course with a lecture component focused on the fundamentals of biostatistics and a lab component where students learn and apply statistical computing skills related to the fundamentals of biostatistics, which are necessary for public health practice and research. Lecture: Students will review descriptive statistics, estimation, and hypothesis testing, as well as regression, correlation, and analysis of variance. At the conclusion of the course, students will be able to analyze real data sets and provide quantitative evidence to support scientific conclusions. The emphasis is on "doing" statistics utilizing sound statistical theory and relying on validated statistical software (SAS) to produce descriptive statistics and inferential analyses, and interpret the results. Lab: The lab will focus on integrating concepts from biostatistics, epidemiology, environmental health, health policy, and social and behavioral health through hands-on data analysis and presentation techniques using SAS statistical software. Modules will also include qualitative software. Labs will immerse students in applied exercises, so they more fully understand the statistical principles presented in the lecture component.

This course does assume an understanding of basic mathematical concepts and terminology. It is expected that students have access to SAS outside of class, either on a laptop or home computer. Non-matriculated and 4+1 students must obtain instructor permission to register.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101 (may be taken concurrently) or EPBI 5201 (may be taken concurrently))

**EPBI 5101. Fundamentals of Epidemiology. 3 Credit Hours.**

The main purpose of this course is to provide an understanding of the basic methods and tools used by epidemiologists to study the health of populations. This course provides a graduate-level introduction to the fundamental concepts and methods used in epidemiology, the basic science of public health and prevention. This course covers terminology used in epidemiology; basic measures of frequency of disease occurrence; concepts of exposure, outcome, and association; epidemiologic study designs; epidemiologic criteria for causality; potential sources of bias and controlling for bias; and the role of epidemiology in public health policy. Applications related to a broad range of current epidemiologic studies are discussed. Students will calculate basic statistics used in epidemiologic studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5201. Epidemiological Research Methods I. 3 Credit Hours.**

This course provides an introduction to the fundamentals of conducting epidemiologic research and protocol development. It covers definitions of epidemiology; measures of disease frequency and risk assessment; measures of effect and association; epidemiologic study designs, including randomized clinical trials, cohort, case-control studies, and cross-sectional surveys; assessment of screening programs; an overview of the role of bias and confounding in epidemiologic study results; and analytic techniques, including modeling using multiple variables, survival analysis, and issues related to quality assurance. Note: This course is the introductory epidemiology course for students in the M.S. in Epidemiology or related Public Health degree programs that require advanced quantitative methods. May be taken in place of EPBI/PBHL 5101 for students in the M.P.H., M.S. in Environmental Health and Ph.D. programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5204. Mental Health Epidemiology. 3 Credit Hours.**

Epidemiology of psychiatric disturbances is explored, including alcohol and other drug dependencies, psychosocial aspects of health and illness. The emphasis is on epidemiologic methods and theories in psychosocial and mental health research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5205. Surveillance, Epidemics and Outbreaks. 3 Credit Hours.**

This course will introduce the tools used by infectious disease epidemiologists to monitor disease trends and will cover the methods used to detect, investigate, and respond to outbreaks and epidemics. We will also look more closely at a few recent outbreaks both in the US and across the globe. Issues relating to ethics and health disparities will be interwoven throughout the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5206. Risk Assessment and Preparedness Decision Making. 3 Credit Hours.**

In the US and abroad, we are faced with public health challenges and emergencies that require data-driven, creative approaches for planning. This course will use an interdisciplinary case-study approach of risk-based public health issues and assist students with developing practical response competencies. Students will apply their skills in the risk sciences (risk assessment, risk management, and risk communication) to evaluate information and make decisions for preparedness and response in the face of imperfect and incomplete information and limited resources. Lastly, students will understand the importance of working with various agencies and community partners for emergency planning and response.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5208. Data Management and Analysis. 3 Credit Hours.**

In this course, students will develop their R and SAS programming skills relevant to public health, with an emphasis on procedures and functions relevant to data management and analysis. Basic statistical procedures as well as data management and manipulation techniques will be covered. Additionally, students will be exposed to advanced data visualization techniques and logic underlying the relevant programming codes. Topics will be covered through a mixture of a lecture, demonstrations, and hands-on R and SAS programming exercises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 5500. Seminar in Current Issues in Public Health. 3 Credit Hours.**

Seminar topics rotate to address current issues in public health research, policy and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may be repeated for additional credit.

**EPBI 8002. Research Seminar in Public Health. 3 Credit Hours.**

This is a research seminar on linkages between theory and research in social and behavioral health studies. It is required for Ph.D. students prior to taking the preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 8011. Social Epidemiology. 3 Credit Hours.**

The purpose of this course is to provide an introduction for graduate students to the key social factors that are thought to influence health. These social factors include constructs such as gender, race, socioeconomic status, and social support. Understanding these social factors is important for public health research and practice. These factors can be considered "fundamental causes" of health outcomes insofar as they may cause or modify other factors that are known to influence health, such as individual behaviors or genetics. The course will focus on the conceptual and theoretical basis of these social factors, how these social factors are measured in epidemiologic research, and the mechanisms by which these social factors are thought to affect health. Students will have the opportunity to improve their skills in critically evaluating empirical data about the association between these social factors and health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101, PBHL 5101, EPBI 5201, or PBHL 5201)

**EPBI 8012. Multivariable Biostatistics. 3 Credit Hours.**

The objective of the course is to provide basic theory and application of regression models, analysis of variance, nonparametric statistics, and survival analysis applied to the analysis of population-based data. The emphasis will be on generating and interpreting results and health related applications rather than on statistical theory. The course is designed for graduate students in public health who are already familiar with basic statistical concepts, including descriptive statistics, the components of statistical inference (p-values, hypothesis tests, confidence intervals, etc.), as well as concepts of confounding and effect modification.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5006, EPBI 5002, or PBHL 5002)

**EPBI 8201. Structural Equation Modeling. 3 Credit Hours.**

An extremely rapid pace of change in statistics and methodology in the field of developmental processes and family systems requires that graduate students (and newly minted PhDs in academic and applied settings) be well versed in current data analytic techniques and able to keep abreast of emergent techniques by being aware of contemporary methodological literature. This course will illustrate the uses of structural equation models for cross-sectional, longitudinal, and family data analysis. The course is organized to take participants through each of the cumulative steps in the analysis: deciding which type of model is appropriate, setting up the data file and coding variables, interpreting and displaying empirical findings, and presenting results in both verbal and written form. Class time will be devoted primarily to lectures, examples, group discussions, and hands-on application of course material.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 8202. Epidemiological Research Methods II. 3 Credit Hours.**

The content of this course illustrates statistical concepts, methods, and strategies used in epidemiologic studies, beyond the principles discussed in EPBI/PBHL 5201 (Epidemiological Research Methods 1). Topics include a review of basic study designs, analysis of prospective and retrospective data, assessment of bias, confounding, effect modification/interaction, statistical methods of stratification and adjustment, sample size/power calculations, importance of quality control and data monitoring in randomized clinical trials, critical determination of causality, and the comprehensive analyses, reporting and presentation of epidemiologic results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5201 or PBHL 5201)

**EPBI 8204. Multilev Mod in Int Res. 3 Credit Hours.**

Interdisciplinary research nearly always involves data with a nested, hierarchical, or multilevel structure. Such data violate the standard statistical assumption of independence of observations. As well, the most important interdisciplinary research questions often involve understanding effects of one level of this structure on characteristics of another level of structure. Within the intervention contexts, individuals often serve as their own context as events unfold over chronological time. This course provides a broad and comprehensive introduction to analysis of multilevel data with an emphasis on questions which bridge disciplines. Participants should be familiar with the general linear model (analysis of variance, regression) prior to enrolling in this course, but no previous familiarity with mixed models (other than repeated measures ANOVA) is assumed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 8205. Chronic Disease Epidemiology. 3 Credit Hours.**

This intermediate course will cover selected topics in chronic disease epidemiology through critical examination of the current literature. Students will have the opportunity to study methodological issues, strategies for prevention, and contemporary issues in research. Coronary heart disease, cancer, diabetes, musculoskeletal disorders, chronic lung diseases and others will be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (SBS 5102, PBHL 5102, EPBI 5101, EPBI 5201, or PBHL 5201)

**EPBI 8206. Infectious Disease Epidemiology. 3 Credit Hours.**

This course provides the basis for understanding infectious diseases, disease transmission, risk factors, outbreak investigation and study designs, surveillance methods, and current infection-control strategies and mechanisms. The purpose of this course is to expose students to the principles and practices of infectious disease epidemiology and how communicable diseases and their control affect public health locally, nationally, and internationally.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101, PBHL 5101, EPBI 5201, or PBHL 5201)

**EPBI 8207. Reproductive and Perinatal Epidemiology. 3 Credit Hours.**

This course presents the epidemiology of major reproductive and perinatal outcomes and offers an overview of human reproduction. The course will be divided into two parts. Part one covers the basic principles of reproductive biology and physiology. The second part will focus on outcomes in reproductive and perinatal research including fertility and fecundity, reproductive disorders, birth defects, preterm birth, fetal growth, miscarriage, stillbirth, and preeclampsia. The course will discuss unique methodological issues and novel study designs in reproductive and perinatal epidemiology. An emphasis of the course will be the evaluation of the current literature related to reproductive and perinatal complications as well as the design of a reproductive or perinatal epidemiologic study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101 or EPBI 5201)

**EPBI 8208. Data Management and Analysis. 3 Credit Hours.**

The content of this course will illustrate practical concepts, methods, and strategies used in the development, management and analysis of large data sets through in-class and homework exercises, quizzes, and a final project. Each class session will be a mixture of a lecture, demonstration and hands-on SAS programming exercises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5002 or EPBI 8012)

**EPBI 8209. Epidemiology of HIV/AIDS. 3 Credit Hours.**

The epidemiology of HIV/AIDS is the subject of this course. Application of epidemiological principles and concepts in infectious disease epidemiology with emphasis on surveillance, research, prevention, and control are covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101, PBHL 5101, EPBI 5201, or PBHL 5201)

**EPBI 8212. Grantsmanship in Health Research. 3 Credit Hours.**

This course will provide students with applied advanced epidemiologic research methods to critically assess gaps in current knowledge and to develop a competitive grant proposal application. Students will apply the epidemiologic methods and knowledge from prior courses and gain expertise in assessing gaps in knowledge, innovative thinking, grant conception, development and writing, study implementation and approach, budget preparation, and grant critiques. In the first half of the course, students will be introduced to the concepts of significance and innovation, identifying gaps in knowledge, choosing an epidemiologic research topic, identifying a funding agency and developing a set of specific aims, significance and innovation statements. In the second half of the course, the grant proposal will be written in the format of an NIH pre-doctoral epidemiology research grant following NIH grant application guidelines including a developed research plan, identified research team, and NIH biosketch and human subject protection plans. Students will be introduced to the concepts of power, sample size and effect size and will calculate necessary power and sample size requirements in the finalized grant proposal. Students will also participate in a mock grant review session. Students will use this opportunity to develop and submit an application for an NIH or foundation pre-doctoral award to support their dissertation work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 8213. Cancer Epidemiology. 3 Credit Hours.**

This course covers general principles of carcinogenesis and genetics of cancer, domestic and international patterns in cancer incidence and mortality, cancer surveillance and screening, cancer prevention and control, as well as epidemiologic characteristics and risk factors for most prevalent cancers among adults, children/young adults, and public health implications of cancer. In addition, there is a focus throughout the course on critical evaluation of different methodological approaches used in cancer research, potential biases inherent given study designs, and practical solutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 5002 and (EPBI 5101 or EPBI 5201)

**EPBI 8301. Clinical Research Methods in Public Health. 3 Credit Hours.**

This course provides an introduction to the core topics in clinical research. Beginning with practical issues in starting and advancing in a career in clinical investigation, the course proceeds to cover diagnosis and treatment studies, research on prognostic and casual risk factors, special types of study design and analyses, principles of measurement in human subjects, studies using secondary databases, and outcomes research. This course will be an elective class for all students enrolled in the Master of Science in Epidemiology, Clinical Research and Translational Medicine, as well as the Doctor of Philosophy in Epidemiology programs. This graduate level course is principally aimed at health care professionals, not limited to the field of public health, usually with graduate courses relevant to their clinical discipline, who desire advanced knowledge and skills in evaluating, designing and implementing clinical research studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5002 or EPBI 5006)

**EPBI 8302. Behavioral Measurement. 3 Credit Hours.**

This course will cover the classical and modern test theories and their applications to solve measurement problems in practice. This course will educate students on measurement concepts including test standardization, validity, reliability, operational definitions, scaling and latent variables in social and behavioral sciences. Issues surrounding validity and reliability of measures will be discussed in detail. Students will be given an opportunity to critically evaluate existing measures and to propose how a new measure can be developed and evaluated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5006, EPBI 5002, or EPBI 8012)

**EPBI 8303. Behavioral Epidemiology. 3 Credit Hours.**

This course covers behavioral epidemiology and its role in public health. Students will be able to identify and explain the appropriate methods for measuring health-related behaviors/outcomes and related psychosocial constructs; critically analyze the appropriateness of methods used within published studies on health-related behaviors as well as determine appropriate methods for behavior-related research questions. In addition, students will use a behavioral theory/model as a framework and apply their skills in the development and assessment of a behavioral intervention to address a current public health problem of their choice including, but not limited to, intervention development, implementation planning, and evaluation/analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5006 or EPBI 5002), (EPBI 5101 or EPBI 5201), and SBS 5002.

**EPBI 8304. Applied Statistical Methods for Incomplete Data Analysis. 3 Credit Hours.**

Inevitable existence of missing data is often a complicating factor in statistical analyses as most standard statistical methods are not designed to handle missing values. Given that almost all data have missingness, advanced statistical computation techniques and methods for analyzing incomplete data have developed tremendously since the 1980s. These methods have been increasingly applied in many settings including highly relevant survey data in public health (e.g., National Health and Nutrition Examination Survey) as well as in many other settings including clinical trials, administrative datasets (e.g., cancer registries) and observational studies. Statistical literature has repeatedly shown that if no action is taken about the missing data, all inferences can be grossly misleading. This course aims to teach and employ principled methods of incomplete data analysis to arrive at objective inferences using highly accessible software tools in SAS as well as R.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 8012.

**EPBI 8307. Systematic Reviews. 3 Credit Hours.**

Systematic reviews are essential tools for health care workers, researchers, consumers, and policymakers who need to keep abreast of the accumulation of knowledge within their field. Systematic reviews provide more objective evaluation of the evidence than has been possible with traditional narrative reviews, and so can help resolve uncertainty and point toward promising future directions in research and practice. When appropriate, meta-analyses can help increase the precision of estimates regarding treatment effects and way to improve treatments. For example, identification of subgroups of individuals most (or least) likely to benefit from treatment can generate new questions to be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 8401. Concepts and Methods in Epidemiologic Research. 3 Credit Hours.**

The doctoral course is designed to be the first in a series of doctoral level epidemiologic research courses and will focus on providing an in-depth conceptual framework of key research concepts and techniques. The course will enhance knowledge of research methods and encourage critical thinking to successfully develop research questions and design research studies. Students will demonstrate mastery in the fundamental skills that enable them to apply epidemiologic research methods to the design, analysis and interpretation of public health data. Specifically, the course will provide didactic and hands-on training in causality and association, study design, bias, error, confounding, causal diagrams, interaction, and effect modification. By the end of this course, students will have the foundational knowledge to begin to apply these methods to their own research. The course is intended for doctoral students in epidemiology or related fields. Students must be enrolled in a doctoral program in the College of Public Health or by permission from instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 8402. Intermediate Concepts and Methods in Health Research. 3 Credit Hours.**

This intermediate level research methods course will solidify student competencies in modern design of population health studies and provide methodological training beyond traditional approaches. This course is designed for doctoral students who have completed EPBI 8401 or a similar graduate level research methods course (as approved by Instructor) that provided a foundation for the understanding of epidemiologic concepts in population based studies. The course will include in-depth instruction through hands-on learning and didactic training that will develop the skills needed for students to design studies that preemptively address threats to validity and data analysis plans for both traditional and novel complex study designs. In addition to focus on the core concepts of study design, students will focus on understanding advanced topics such as causal inference and bias analysis. Students will also understand commonly encountered study issues such as competing risks, confounding, error, bias, and missing data. By the end of this course, students will move beyond understanding conceptual methods learned in entry-level research methods courses and will advance to applying traditional and advanced concepts to study design and data analysis planning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 8401 or EPBI 8202)

**EPBI 8403. Applied Concepts and Methods in Health Research. 3 Credit Hours.**

This laboratory-based class will focus on analytic exercises to analyze and interpret data from cross-sectional, case-control, cohort, longitudinal and nested studies. Concepts will include traditional regression modeling as well as multilevel/hierarchical modeling, bias analysis, and Bayesian statistics. Students will learn how to apply key epidemiologic concepts to the analysis of data. By the end of this course, students will have developed the practical skills needed to analyze and interpret epidemiologic data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may not be repeated for additional credits.

**EPBI 9083. Readings and Conference in Public Health. 1 to 3 Credit Hour.**

This is an advanced tutorial in public health with an appropriate faculty member. Note: Registration requires a written contract with the supervising faculty member and approval of the student's advisor and of the Director of Graduate Programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPBI 9187. Biostat Cnslt Practicum. 3 Credit Hours.**

The objective of this course is to prepare students to collaborate effectively as biostatistics support consultants in the health professions. The emphasis will be to refresh statistical techniques and develop communication and problem solving skills. This course is designed for graduate students in public health who can use well-validated commercial statistical software, such as SAS, for the analyses of data from observational and/or interventional research studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPBI 9289. MPH Fieldwork I. 3 Credit Hours.**

This course entails a fieldwork project or internship in a public health agency. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 5201, ((EPBI 5002 and EPBI 5005) or EPBI 5006), HPM 5006, SBS 5001, and EPBI 8012 (may be taken concurrently)



**EPBI 9389. MPH Fieldwork II. 3 Credit Hours.**

This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 9289, EPBI 8012, and EPBI 8202 (may be taken concurrently)

**EPBI 9991. Public Health Research Project. 1 to 3 Credit Hour.**

Under the direction of an appropriate graduate faculty member, students tie together their coursework in a project that poses a problem, gathers data to help analyze the problem, and provides a solution. Note: Enrollment must be approved by the student's advisor and the Director of Graduate Programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPBI 9994. Preliminary Examinations. 1 Credit Hour.**

This course supports preparation for taking the preliminary examinations in the Health Policy and Social and Behavioral Sciences Ph.D. programs. To enroll, students must have completed all required coursework for the Ph.D. and obtain the approval of the Ph.D. Program Director. Students must be enrolled to take the required preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may be repeated for additional credit.

**EPBI 9996. Masters Res in Pub Hlth. 3 Credit Hours.**

This course is limited to students who have chosen to fulfill the master's degree by writing a thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**EPBI 9998. Dissertation Proposal Research. 1 to 2 Credit Hour.**

This course supports preparation of the dissertation proposal. The course is required for students who have passed the preliminary examinations for their PhD program and who have not yet defended the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in EPBI 9994.

**EPBI 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is limited to Ph.D. candidates who have completed and defended a dissertation proposal that is filed with the Graduate School by the last day to add a course in the semester. Continuous registration in 9999 fall and spring is required until the dissertation is successfully defended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Family & Community Medicine (FAMP)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**FAMP M150. Intro to Public Health. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M151. Primary Care Scholars Continuity Clinic. 0 Credit Hours.**

It is well established that as the US population ages and live with an increasing number of chronic diseases, access to primary care will become increasingly critical. Despite the steady (and growing) demand, a relatively small percentage of students here at Temple choose to pursue primary care specialties following graduation. We have heard from our students that a variety of factors influence their decision; however, early and consistent access to primary care faculty, mentorship support in career planning and visibility of the wide range of options available within the spectrum of primary care are all areas we can easily address today.

**Repeatability:** This course may be repeated for additional credit.

**FAMP M300. Career Exploration of Sports Medicine. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**FAMP M360. Family Medicine. 0 Credit Hours.**

**Course Attributes:** M7

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M420. Urban Community Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M421. Case Management. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M430. Indian Health Service. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M436. Sports Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M440. Family Medicine Private Practi. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M441. Family Practice Resident Sites. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M879. Family Medicine Subinternship. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**FAMP M994. Correctional Health Care. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

## Film and Media Arts (FMA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**FMA 5241. Cinematography Workshop. 4 Credit Hours.**

The art, theory, and technology of film production with special attention paid to location lighting, location sound, cinematic composition, and film structure. This is a dual level course, intended for both the experienced filmmaker and the media-aware but inexperienced graduate student ready for intensive, accelerated study in the design and solution of cinematographic problems. Note: This course is required for the fall semester of the first year of the MFA program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5242. Videography. 4 Credit Hours.**

Lectures, demonstrations and practical exercises in the art, theory, and technology of video and electronic media production. Note: This course is recommended for the spring semester of the first year of the MFA program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5243. Audio Production and Aesthetics. 4 Credit Hours.**

A production workshop on audio as a form of aesthetic expression. Students will explore theoretical concepts as they use digital audio recording and editing systems to complete projects. Lectures, demonstrations, hands-on instruction, exercises, critiques and discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5244. Lighting for Film & Video. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5248. Introduction to 3D Modeling. 4 Credit Hours.**

This course introduces the concepts and techniques of three-dimensional digital graphics, using Lightwave3D software. The first half of the semester introduces a broad palette of techniques and formal ideas, while the second half is spent on a major project of your own design. Previous experience with graphics or animation software is not required. The course offers a unique skill set and formal perspective.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Film and Media Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5249. Introduction to 3D: Animation. 4 Credit Hours.**

This course introduces the concepts and techniques of three-dimensional digital imagery and motion graphics, using Lightwave3D software. The first half of the semester introduces a broad palette of techniques and formal ideas, while the second half is spent on a major project of your own design. The course offers a unique skill set and formal perspective for upper level students. Open to juniors and seniors, including non-majors and upper-level students from other colleges, with the specific aim of fostering an interdisciplinary, collaborative workshop environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5341. Scene Analysis for Writers and Directors. 4 Credit Hours.**

Analysis and exercises dealing with the conventional language of mainstream narrative film, including how this language, traditionally presented as the only way to organize narrative films, actually serves to circumscribe the kinds of stories that may be told.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5344. Adaptation and Docudrama: Screen and Television Writing from Pre-Existing Source Material. 4 Credit Hours.**

This will be an exercise course leading to a final written project. It will focus on screenplays for film and television based on literature, drama and historical events. Because the material pre-exists, the course will be able to focus on the nuances of translation to screen including the visual representation of internal life, time, levels of reality, "voice," historical context, and social change.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5361. Writing for Media I. 4 Credit Hours.**

A seminar and workshop exploring various approaches to screenwriting, including documentary treatment, experimental appropriation, performative conceptions, and narrative screenplays. Through weekly exercises and a final project, each student will begin to develop a personal integration of these approaches leading to a "voice" of his/her own. Note: This course is required for the fall semester of the first year of the MFA program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5362. Serial Writing. 4 Credit Hours.**

This is a writing workshop focusing on dramatic serial writing in which students learn to work in close collaboration with other class members. In preparation for the class, students will be required to read or view several dramatic serials as well as read several pilot scripts. The class itself will hear "pitches" for a serial, select one story, and then begin to develop it.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FMA 5361.

**FMA 5440. Topics in Production. 4 Credit Hours.**

A workshop in film, video, audio, or emerging new technologies. The course will address a particular production issue (an aspect of technology or an aesthetic approach) each time it is offered, such as color correction, 3-D computer animation, special effects, digital audio applications, and multimedia.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Film and Media Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 5451. Animation Workshop. 4 Credit Hours.**

A creative workshop exploring the concepts, aesthetics, and techniques of independent animation in a number of media from cards and cels to digital design and manipulation. Note: Offered summer only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5452. Digital Animation, Compositing and Modeling. 4 Credit Hours.**

Animation, image compositing and object modeling have facilitated the crossover between animation and photographic imaging, mingling the fictive and the realistic image in digital film and videomaking. This workshop explores the techniques and effects of processing and layering the moving image within film/video language and within non-linear structures. Primary focus is on 2D animation and compositing using Adobe AfterEffects with other software packages introduced as time permits.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Film and Media Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5453. Interactive Design Workshop. 3 to 4 Credit Hours.**

This workshop explores the use of interactive media for the public exhibition of historical and artistic materials in libraries, museums, or other cultural institutions. Students have direct access to an archival museum collection, and will be guided in elaborating the themes, cultural significance, and aesthetic value of these historical materials, with the challenge of transforming them for the real, online and virtual spaces that are accessible to contemporary audiences. The course will teach interactive applications such as video motion tracking, projection design, interactive VR environments, and mobile Augmented Reality. Thematically, the course will explore the challenges of cultural visibility and access and aim for critical forms of public engagement with cultural production and presentation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5462. Video Game Theory and Writing. 4 Credit Hours.**

This course will look at both the critical literature that has developed around video games and other interactive environments, as well as the practice of writing video games. Student's work will combine critical essays and written game or interactive creation that explores some of the theories addressed in the course. The course will look at some of the major issues in video game studies, such as simulation, representation, play, narrative, the ergotic, cut-scenes, and interactive space and time, as well as considering how video games may engage some long-standing aesthetic and philosophic questions that predate these games themselves.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5468. Art-Culture-Technology Seminar. 4 Credit Hours.**

This seminar introduces a broad array of theories and critical perspectives on cinematic arts and alternative media. The course explores how the emergence of differing media technologies such as cinema, video and computing have shaped paradigms of cultural and political organization as well as personal, physical and cognitive self-understanding. Topics include spectatorship and viewer participation, the gaze and identity construction/deconstruction, transmedia documentary, rhizomatic narrative, multiple screen installations, video art, sound art, interactivity, spatiality and new urbanisms, networked and geolocated media, net art and hacktivism, user-generated media, virtual worlds, and game theory. The course explores interdisciplinary approaches to scholarly and creative inquiry, with research and readings traversing fields of the arts, humanities and sciences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FMA 5674.

**FMA 5471. Media Arts Projects at the Kimmel: The Virtual City. 4 Credit Hours.**

Graduate and undergraduate students will work with Prof. Roderick Coover and visiting artists at the Kimmel Center to create works using emerging cinematic technologies including virtual reality (VR). The course aims to produce highly experimental and collaborative media arts works oriented around themes of the city. The course will take place at main campus, center city campus and at the Kimmel Center. This course is open to students from across the arts and it encourages interdisciplinary and cross-genre collaborations of image, sound, movement and performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 5473. Moving Camera Workshop. 4 Credit Hours.**

Moving Camera Workshop is a graduate level workshop course that explores the art and practice of moving camera media production. The course covers the range of techniques including hand-held, dolly, jib, virtual/motion sensors and Steadicam operation. Class time will be spent on group discussions/exercises, lectures/screenings, lab instruction and critiquing work. Through a series of production projects, students will work through the aesthetics of moving camera and gain the technical and physical expertise necessary for successful projects. This course will also explore the theory and history of camera movement as well as blocking and directing techniques. Locative and mobile media projects extend the work outside the classroom. Research on new camera movement technologies is used to move toward innovative student media projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in FMA 5242.

**FMA 5553. Color Correction. 4 Credit Hours.**

Advanced Color Correction is a graduate level workshop that explores the aesthetic considerations and technical aspects of color in modern postproduction and cinematography. Color has a subconscious influence on emotion in storytelling. With the advent of modern digital cinema, every film and television production undergoes some level of color grading. Cinematographers must understand the process to maintain creative control of the images they produce. Editors must understand the process to perform basic color correction on low budget productions. This class is a combination of lecture and workshop with each student striving to efficiently navigate the art and practice of color correction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (FMA 5241 or FMA 5242)

**FMA 5670. M.F.A. Colloquium. 1 Credit Hour.**

Wide variety of discussions, screenings, and lectures from guest image makers, exploring and integrating a range of theoretical, conceptual, and pedagogical aspects of film and video production. This course must be taken a second time for fulfillment of the MFA degree in FMA. Note: This course is required for the fall semester of the first year of the MFA program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 5671. Film Theory Seminar. 3 Credit Hours.**

This seminar explores major theoretical approaches to the study of cinema and related media arts. Readings will present key debates and concepts for understanding the aesthetics, meaning, ideology, and cultural role of the medium. Note: Prior to Fall 2023, the course title was "Film History and Theory."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5672. History of Documentary Film. 4 Credit Hours.**

An international, historical survey of the factual film, including creative documentary, anthropological film, television news film, direct cinema, and cinema verite.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5673. Time-Image Arts/Cinema Praxis. 4 Credit Hours.**

This screenings-oriented seminar examines how writers such as Deleuze, Taussig, and Robbe-Grillet and media makers such as Antonioni, Frampton, and Viola expand our ideas about time-based images and the production of space in a globalizing technological era. Students respond to readings and screenings through short biweekly papers that launch seminar discussions. Students conclude the course with a paper (M.A./Ph.D. students) or project (M.F.A. students) and a cross-disciplinary critique of each other's works. Note: Cross-listed with Philosophy and Art History.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5674. Media Arts Thry-Practice. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5676. Anthropological Film/Media. 3 Credit Hours.**

Anthropological perspectives on media studies in terms of both cultural organization and anthropological research tools; includes anthropological and communication theory, history of ethnography, and research methods with special emphasis on visual recording modes.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Film and Media Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5680. Topics in Film Study. 4 Credit Hours.**

Lectures and screenings on a special topic arranged each semester. Topics may include: Advanced Film Theory, Third Cinema, Soundtracks, Exile Cinema, The Idea of Art Cinema, Hollywood Cinematographers, Hybrid Cinema, Gender and Sexuality. Please consult with the instructor.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Film and Media Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 5770. Topics in Producing. 3 Credit Hours.**

A workshop in film and media art producing. The course will address a particular producing issue each time it is offered, such as budgeting, scheduling, project development, or entertainment law.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may be repeated for additional credit.

**FMA 5771. Producing. 4 Credit Hours.**

An overview of the processes of financing, managing, promoting, and distributing a documentary, fiction, or experimental production. Emphasis is on projects produced independently, outside the commercial mainstream, and without institutional sponsorship or governance. Students will produce a comprehensive proposal for a viable film or videotape project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5772. Fundraising for Independent Media. 3 Credit Hours.**

This course is a workshop class where students must come prepared with a project around which they will create a fundraising campaign. During the course of the semester students will be exposed to information on grant writing, non-profit and for-profit media entities and the legalities of media producing. At the conclusion of the course, students will have a full funding proposal ready for dissemination to various funding sources.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 5773. Entertainment Industry Perspectives. 4 Credit Hours.**

This course explores career paths and current trends in the entertainment industry through weekly guest lecturers who are working professionals in a variety of related fields. Students also study and learn professional skills and industry conventions relevant to their future careers. Writing assignments will include critical responses to trade journal articles about the student's chosen field as well as a series of student-conducted case studies of and interviews with practitioners in the student's area of focus. NOTE: Student must be a graduate participant in the FMA LA-Away program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8240. Special Problems in Film and Media Arts. 1 to 4 Credit Hour.**

Special seminars typically taught by distinguished visiting faculty. Inquire at departmental offices for details, since these seminars often are scheduled on short notice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8241. Advanced Cinematography. 4 Credit Hours.**

Advanced theory and practice in the making of films with personal vision and crewing each other's productions in Super 16mm, 35mm or High Definition 24P digital video, along with technical and aesthetic exercises deconstructing cinematographic/videographic moviemaking.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8242. Experimental Media Wksp. 4 Credit Hours.**

An advanced workshop to develop projects in experimental, documentary, or narrative forms using portable video, TV studio, and computerized image and editing facilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8243. Film Sound. 4 Credit Hours.**

A production workshop on audio recording, editing and mixing of dialogue, foley, effects and music for film and electronic media. Lectures, demonstrations, hands-on instruction, exercises, critiques and discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8244. Experimental Methods. 4 Credit Hours.**

An introduction to formal concepts and experimental methods of film production with a workshop emphasis on optical printing, hand painting on film, manipulating the film image and exploring the material nature of the film medium. The course includes readings in the theories and history of experimental film and media arts production.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8245. Documentary Workshop. 4 Credit Hours.**

Design, pre-production planning, production, and subsequent evaluation of individual documentary projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 8 credit.

**FMA 8246. Advanced Documentary/Fiction Workshop. 4 Credit Hours.**

Designing and executing individual documentaries, dramatic projects, or works that intermix the strategies of documentary and fiction while dealing with socially significant material. Each project will involve one month of planning and scripting, one month of field production in film or video, and a final month of editing and postproduction. Lectures, demonstrations, critiques, and crew assignments on each other's projects will accompany the intensive fieldwork.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8340. Topics in Production. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8341. Screen Directing Theory and Practice. 4 Credit Hours.**

Theories of directing, dramatic form, and acting are examined through lectures, demonstrations, readings, and applied exercises to establish a theoretical and practical foundation in film and television directing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8361. Writing for Media II. 4 Credit Hours.**

The preparation of a scenario and complete television or motion picture script.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8362. Joint Writing Workshop 1. 4 Credit Hours.**

This is an advanced workshop course designed for students in the Film and Media Arts MFA in Screenwriting. It will be offered in conjunction with a similar Writing Workshop offered by the Theater MFA in Playwriting. Students will complete the first draft of a feature screenplay or serial bible.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FMA 8361.

**FMA 8363. Joint Writing Workshop 2. 4 Credit Hours.**

This is an advanced workshop course designed for students in the Film and Media Arts MFA in Screenwriting. It will be offered in conjunction with a similar Writing Workshop offered by the Theater MFA in Playwriting. Students will polish and complete the final draft of a feature screenplay or serial bible.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FMA 8362.



**FMA 8450. Topics in Media. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8451. Digital Animation. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8452. New Technology Laboratory. 4 Credit Hours.**

Exploration, study, design, production, and implementation of hypermedia projects including interactive and computer controlled video, computer graphics, digital sound, videodisc, virtual reality, and other emerging technologies. Interdisciplinary collaborations will be encouraged between FMA, Computer Sciences, Engineering, Architecture, Art, and Music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8461. Interactive Narrative. 4 Credit Hours.**

A creative course within a critical frame in which students make and study interactive narratives; textual, audio and graphics/video based stories that incorporate explicit user choice. Weekly exercises and readings, followed by a substantial final project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8462. Documentary Arts and Visual Research. 3 to 4 Credit Hours.**

Students examine theories, methods and interdisciplinary approaches to nonfiction representation and depiction in order to develop documentary research and/or documentary projects. Students are expected to complete highly developed papers and/or documentary projects that are directly related to their thesis topics, methods, and goals. The course is open to graduate students from across the university with permission of the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8551. Digital Post-Production. 4 Credit Hours.**

Advanced tools and concepts of digital non-linear editing of film and video with emphasis on fine-cut preparation, file management, ProTools, foley, looping, multi-track mixing, compositing, titling, EDL generation, and film matchback.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8670. Topics in Media Studies. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8673. Historical Film Research. 4 Credit Hours.**

Major trends in theatrical film history and the methods and issues in the writing of film history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8674. Critical Studies Seminar. 3 Credit Hours.**

This seminar explores topics in the critical study of cinema or media arts to introduce students to the process of deeper scholarly inquiry into a given area of film or media arts study. Topics will rotate by semester, and students will watch and read widely on the theoretical concepts or historical periods under consideration. The course may be repeated with different topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8675. Seminar: International Film. 4 Credit Hours.**

A critical and historical examination of the films of a particular country or world region. Topics vary per semester. May be repeated (as long as the specific topic is not duplicated).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8680. Advanced Topics in Media Arts Studies. 4 Credit Hours.**

Advanced Topics in Media Arts Studies is a variable-content topics history/theory course in such media art topics as new technologies, sound, interactive video, mobile media, visual ethnography and other areas of interdisciplinary media art. This is a media arts studies course for graduate students.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Film and Media Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8771. Exhibition/Distribution. 3 Credit Hours.**

The objective of this course is to expose students to methods and approaches for exhibition and distribution of independent media. Students will investigate popular media outlets such as film/video festivals, microcinemas and internet exhibition possibilities, to name only a few. The course will serve dual functions in that it will prepare students to distribute their own work while also exposing them to industry opportunities in exhibition and distribution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 8870. U Penn Critical Studies. 4 Credit Hours.**

Recipient of the Temple (FMA)-UPenn Exchange Award that is given to one student per year to engage in studies in the University of Pennsylvania Program in Cinema Studies. The exchange has been officially approved by the Temple University and the University of Pennsylvania.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 8985. Teaching in Higher Education, Arts. 3 Credit Hours.**

This course focuses on the research on how people learn and best teaching practices, with the aim of preparing students for effective higher education teaching in the arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 9085. Professional Field Experience. 1 to 4 Credit Hour.**

Field work on an outside professional production or media presentation with a position of creative, curatorial or managerial responsibility. May be repeated. Up to four credits may count toward the MFA degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 9086. Study-Away Internship. 1 to 4 Credit Hour.**

Students apply for and perform internships in wide variety of entertainment industry fields. Students also study opportunities available to emerging professionals in their areas of specialty. Students submit weekly journals related to their internship experiences and assigned readings, as well as a final written reflection on their field experience, personal growth, and knowledge gained. NOTE: Internship placements subject to student qualifications and availability of openings. Must be admitted into Film and Media Arts LA-Away Program. Contact FMA's internship director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 9245. Thesis Development Workshop. 4 Credit Hours.**

This writing intensive workshop is designed to aid in the conceptualization, development and preproduction phases of the final thesis production. Through a diverse range of creative exercises, writing assignments and visiting lecturers, students will complete their thesis proposal with clear plans for executing their thesis film.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in FMA 8674.

**FMA 9246. Thesis Production Workshop. 4 Credit Hours.**

This production workshop is designed to support the production of final thesis projects. Through a diverse range of workshops and visiting lecturers, the course is designed to support the production phases of final thesis projects with the goal of completing production by the course's end.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in FMA 8674.

**FMA 9282. Directed Projects. 1 to 4 Credit Hour.**

Individual production projects proposed by advanced students under the tutorial supervision of a faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 9346. Methodologies and Praxis. 4 Credit Hours.**

This seminar offers core training in doctoral research methods across film and media arts and related fields. Drawing upon scholarly traditions in visual research in the humanities and social sciences, the course is designed to help students gain deep understanding of differing research approaches to develop research methods best suited to their dissertation projects. Student learn to systematically develop their research projects, combine research from archival, data and field sources, and integrate quantitative and qualitative research materials into their arguments. Students learn to develop annotated bibliographies, contrast research approaches to their potential thesis questions, and position their work for differing audiences. In developing strategies of implementation, students are instructed in IRB and other research protocols and engage readings on ethics and academic standards.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may not be repeated for additional credits.

**FMA 9683. Directed Readings. 1 to 4 Credit Hour.**

Individual research/theory projects proposed by advanced students under the tutorial supervision of a faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 9994. Doctoral Comprehensive Exam Study. 1 to 6 Credit Hour.**

Open only to PhD candidates in Film and Media Arts for preparation for their doctoral comprehensive examination. A maximum of six credit hours will be counted toward the degree.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Documentary Arts + Visual Res.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 9995. M.F.A. Project. 1 to 4 Credit Hour.**

Open only to MFA candidates in Film and Media Arts for their final project. May be repeated for credit during all semesters the final project is in progress, although only a maximum of six hours will be counted toward the degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 9998. Doctoral Dissertation Proposal. 1 to 3 Credit Hour.**

Open only to PhD candidates in Film and Media Arts for their doctoral thesis proposal research, writing and presentation. A maximum of six credit hours will be counted toward the degree.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Documentary Arts + Visual Res.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FMA 9999. Doctoral Dissertation. 1 to 3 Credit Hour.**

For PhD students actively completing thesis work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in FMA 9998.

## Finance (FIN)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**FIN 5001. Financial Analysis and Strategy. 3 Credit Hours.**

This course develops the conceptual framework that is used in analyzing the financial management problems of business enterprises. Students cover concepts such as the time value of money, the cost of capital, the relationship between risk and return, the valuation of assets such as stocks and bonds, and various corporate finance issues, including capital budgeting, capital structure, corporate financing, and dividend policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5001, ACCT 5003, (ACCT 5301 and ACCT 5302), or (ACCT 5401 and ACCT 5402)) and (STAT 5001, (STAT 5401 and MIS 5401), or (STAT 5301 and MIS 5301))

**FIN 5104. Advanced Corporate Finance. 3 Credit Hours.**

This course builds on the core M.B.A. finance course to develop the critical skills and the analytical tools necessary to apply financial theory to real world situations. The theme of this course is corporate valuation and how corporate decision-making impacts firm value. Four broad topics are covered in this course: cost-of-capital estimation and cash flow estimation; capital structure and dividend policies from the perspective of their impact on firm value; the use of real-option techniques in valuing corporate assets; and mergers and acquisitions, including bidding, takeover defenses, and golden parachutes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5108. Derivatives. 3 Credit Hours.**

This course provides students with a basic knowledge of the futures, options, and other derivative markets, their market structure, theoretical foundation, and the derivative strategies of both speculators and hedgers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302)) and FIN 5109.

**FIN 5109. Investments. 3 Credit Hours.**

This course provides an understanding of the theory of investments, and introduces the tools and techniques used in investment management. Topics include portfolio theory; equilibrium models of security prices, including the capital asset pricing model and arbitrage pricing theory; empirical behavior of security prices; market efficiency; performance evaluation; and fixed-income markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5111. Corporate Valuation. 3 Credit Hours.**

This course covers the valuation of public and private companies using discounted cash flow models, market multiples methods, and hybrid models. Valuation techniques within the discounted cash flow paradigm include dividend discount models, free-cash flow models, and residual income. Market multiples methods will include both price and enterprise models. The instructional format of the course is lecture supplemented with case analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5114. Financial Markets and Institutions. 3 Credit Hours.**

This course is a survey course of financial instruments, markets and institutions. Topics covered include time value of money, interest rates and yield curves, financial markets efficiency, fundamentals of financial institutions, depository institutions, and interest rate risk management. While the primary focus is on U.S. markets, the course also considers global financial markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5115. Financial Modeling for Investments and Corporate Finance. 3 Credit Hours.**

This course will develop the modeling skills that are used in the investments and investment planning process. Spreadsheet Models for the valuation and analysis of investment alternatives will be developed. These will include portfolio modeling to obtain the optimal asset mix to meet investor's goals, valuation models for both equity and fixed income securities and models for alternative investment such as real estate, commodities, options and other investments. Applications of these models will be used through the case method. Solutions to real world problems that investors face will be addressed in these analyses. In addition, alternate models for determining the expected returns on investment will be addressed. This course will develop the modeling skills that are used in the process of corporate decision-making. It will include the development of models for financial statement analysis and the evaluation of investment decisions including the capital budgeting, cost of capital and company valuation. Application models of NPV, IRR, Payback Period, MIRR and other methods of establishing the cash flows and the relative value of projects as faced by corporate decision makers will be developed. These models will be utilized in real world applications through the case method to address the steps needed to make optimal business decisions. In addition, how to establish the appropriate return on a corporate investment will be modeled and addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001 (may be taken concurrently), (FIN 5301 (may be taken concurrently) and FIN 5302 (may be taken concurrently)), or (FIN 5401 (may be taken concurrently) and FIN 5402 (may be taken concurrently)))

**FIN 5134. Fintech, Blockchain and Digital Disruption. 3 Credit Hours.**

The course gives students exposure to the technological advances that are reshaping the financial services as well as other industries using a variety of outside sources including research papers, business news articles and guest speakers. Specifically, the course focuses on block-chain, digital currencies, artificial intelligence (AI), machine learning (ML), internet of things (IoT), virtual reality (VR) and the regulatory environment surrounding these innovations. We are living in a business world that is always changing, and understanding how to observe and analyze changes is a skill as broadly applicable as it is useful.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BA 5002.

**FIN 5156. Private Equity. 3 Credit Hours.**

This course provides a broad coverage of the private equity market. The course is divided into two distinct segments. The first section addresses the structure of PE funds, evaluation of fund performance, and identification, structuring, and valuation of individual venture capital opportunities. The last segment focuses on leveraged finance and exit. This course is largely case-based, runs at a fast pace, and offers a unique opportunity to interact with private equity industry professionals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5170. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5180. Special Topics Finance. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5182. Independent Study. 1 to 6 Credit Hour.**

Special study is undertaken in a particular aspect of finance under the direct supervision of an appropriate graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FIN 5190. Special Topics - Finance. 1 to 6 Credit Hour.**

Special Topics - Finance

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**FIN 5411. Financial Management. 3 Credit Hours.**

This course provides an overview of the financial challenges associated with the life cycle of an organization. Topics include: financial analysis and planning, capital budgeting, cost of capital, financial statements, and the sources and uses of business funds. While the emphasis is on decision making within a corporate environment, the tools taught in this course are just as relevant to other forms of business organization and to personal financial management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (ACCT 5411 or ACCT 5001)

**FIN 5601. Financial Technology. .5 or 1 Credit Hours.**

This course teaches specialized financial software, financial market databases and quantitative financial tools. Financial Technology may be repeated up to one credit hour.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for a total of 1 credit.

**FIN 5602. Corporate Finance. 1 Credit Hour.**

This course reviews economic principles governing financial markets and corporate management and develops financial analysis skills. Topics include capital budgeting and cost of capital.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5603. Financial Accounting. 1 Credit Hour.**

This course reviews the practice of financial accounting and develops skills in analyzing financial statements. Topics include financial reporting quality and International standards.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5604. Derivative Markets. 1 Credit Hour.**

This course covers global exchange-traded and over-the-counter futures, options and swap instruments and financial applications. Topics include option investment strategies and structured swap applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5605. Fixed Income. 1 Credit Hour.**

This course examines the features and trading behavior of global fixed income markets. Topics include features of debt securities, bond valuation, interest rate risk immunization and foreign exchange.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5607. Stochastic Calculus & Finance. 1 Credit Hour.**

This course covers the mathematical foundations of stochastic calculus with financial applications. Topics include Brownian motion, stochastic integrals and stochastic differential equations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5612. Asset Pricing. 1.5 Credit Hour.**

This course examines the relationship between financial risk and rates of return. Topics include equilibrium and empirical approaches to asset pricing and international asset pricing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5613. Derivative Valuation. 1.5 Credit Hour.**

This course explores equity, fixed income, foreign exchange and commodity derivatives valuation and risk management applications. Coursework includes trading in futures and options markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5614. Continuous Time Finance. 1.5 Credit Hour.**

This course covers continuous-time financial theory and option pricing methods. Topics include risk-neutral pricing and equilibrium asset pricing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5615. Data Science in Finance. 1.5 Credit Hour.**

This course explores the tools and techniques of data mining to extract useful information from large financial data sets. Topics include data cleaning, data visualization and data mining for global financial market insights.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Fin Analysis + Quant Risk Mgt, Financial Analysis & Risk Mgmt, Financial Engineering, Financial Analysis, Investment Management, Quant Fin + Risk Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5618. Corporate Value Management. 1.5 Credit Hour.**

This course examines the drivers of firm value and develops financial statement analysis skills. Topics include free cash flow valuation, industry analysis and valuation in emerging markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5619. Quant Fixed Income. 1.5 Credit Hour.**

The course covers the mathematics driving fixed income markets. Topics include term structure modeling, interest rate immunization and fixed income derivatives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5622. Machine Learning in Finance. 1.5 Credit Hour.**

This course examines machine learning techniques for exploring relationships between financial economic variables and making future predictions. Topics include financial modeling and learning algorithms for global market insights.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Fin Analysis + Quant Risk Mgt, Financial Analysis & Risk Mgmt, Financial Engineering, Financial Analysis, Investment Management, Quant Fin + Risk Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FIN 5615.

**FIN 5623. Risk Measurement. 1.5 Credit Hour.**

This course examines alternative measures of value-at-risk (VaR) including stress-testing and scenario analysis. Topics include Monte Carlo Methods and risk management failures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.



**FIN 5624. Numerical Methods. 1.5 Credit Hour.**

This course examines numerical lattice, Monte Carlo and finite difference methods for pricing vanilla and exotic options. Topics include implied trinomial trees and variance reduction techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5627. Financial Econometrics. 1.5 Credit Hour.**

This course examines linear regression and time series models with applications to corporate finance and investments theory. Topics include interpreting regression coefficients and estimating correlation and volatility using GARCH models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5628. Global Economy. 1.5 Credit Hour.**

This course examines global macro-economic conditions. Topics include monetary and fiscal economics, economic indicators, the European Monetary Union and the causes of financial crises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5629. Value at Risk. 1.5 Credit Hour.**

This course examines advanced quantitative methods for estimating the risk of financial loss and risk management applications. Topics include scenario analysis, incremental risk and VaR back testing techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5631. Financial Time Series. 1.5 Credit Hour.**

This course teaches methods for analyzing time series data and for forecasting future events. The course offers a mix of financial data analysis together with statistical theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5632. Investment Management. 1.5 Credit Hour.**

This course explores portfolio management for individual and institutional investors. Coursework includes formulating a strategic equity and fixed income asset allocation strategy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5634. Stochastic Volatility. 1.5 Credit Hour.**

This course examines alternative models of implied volatility and model calibration to observed market data. Topics include the term structure of volatility and jump diffusion models of the volatility smile.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5637. Applied Corporate Finance. 1.5 Credit Hour.**

This course examines corporate financial restructuring and mergers and acquisitions. Topics include leveraged buyouts, industry capital structure and corporate governance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5638. Behavioral Finance. 1.5 Credit Hour.**

This course examines insights of efficient market theory and behavioral finance for the historical pattern of asset prices. Topics include bubbles, momentum and limits to arbitrage.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5639. Quantitative Risk Modeling. 1.5 Credit Hour.**

This course covers advanced quantitative analysis and assessment of market, credit and operational financial risks. Topics include hedging exotic options and default risk measures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5641. Alternative Investments. 1.5 Credit Hour.**

This course explores proprietary hedge fund strategies and performance measures. Topics include relative value strategies, distressed debt and real estate investment trusts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5642. Entrepreneurial Companies. 1.5 Credit Hour.**

This course examines how entrepreneurial firms pursue financing at various growth stages. Topics include private company valuation, venture capital and new issues markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5643. Structured Products. 1.5 Credit Hour.**

This course teaches the financial engineering of structured product and hybrid security offerings. Topics include exotic derivatives and tailored investment strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5646. Frontiers in Quantitative Finance. 1.5 Credit Hour.**

Seminar in selected classic and evolving industry methods and applications of quantitative finance.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Fin Analysis + Quant Risk Mgt, Financial Analysis & Risk Mgmt, Financial Engineering, Financial Analysis, Investment Management, Quant Fin + Risk Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FIN 5634.

**FIN 5647. Financial Reporting & Analysis. 1.5 Credit Hour.**

This course examines advanced financial accounting practices, theory, and issues. Topics include employee compensation, multinational operations and financial reporting quality.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5648. Quantitative Portfolios. 1.5 Credit Hour.**

This course examines portfolio management based on quantitative techniques versus fundamental valuation methods. Topics include statistical arbitrage and computer-based models for trading.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5649. Enterprise Risk Management. 1.5 Credit Hour.**

This course covers the analysis and development of a best in practice enterprise-wide risk management system. Topics include corporate risk tolerance and strategic risk and capital management issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5671. Financial Analysis I. 1.5 Credit Hour.**

This course explores the CFA Program's CFA Level I Candidate Body of Knowledge: ethical and professional standards, quantitative methods, economics, financial reporting, corporate finance, equity investments, fixed income, derivatives, alternative investments and portfolio management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5672. Financial Analysis II. 1.5 Credit Hour.**

This course examines the CFA Program's CFA Level I and II Candidate Body of Knowledge emphasizing the application of investment tools and concepts in asset pricing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FIN 5671.

**FIN 5673. Financial Risk Management I. 1.5 Credit Hour.**

This course explores the FRM Program's Part I Curriculum covering the tools used to assess financial risk: quantitative analysis, fundamental risk management concepts, financial markets and products, and valuation and risk models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5674. Financial Risk Management II. 1.5 Credit Hour.**

This course examines the FRM Program's Part I and Part II Curriculum focusing on the application of financial risk management tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in FIN 5673.

**FIN 5675. Professional Development. 1 Credit Hour.**

This course examines the importance of professional growth to the financial analyst. Topics include career development goals, effective professional communication, leadership and management skills and ethical issues specific to careers in finance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 5683. Special Study in Finance. .5 to 6 Credit Hours.**

Special study is in a particular aspect of finance under the supervision of an appropriate faculty member. No more than six semester hours of special study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**FIN 5690. Special Topics in Finance. .5 to 6 Credit Hours.**

Special Topics is in a particular aspect of finance under the supervision of an appropriate faculty member. No more than six semester hours of special study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FIN 5802. Enterprise Financial Management. 3 Credit Hours.**

Enterprise financial management deals with the financial implications of decisions made by firms. The two broad decisions facing the finance manager are (i) what projects should I invest in?, and (ii) how do I finance these investments? These questions will be answered in this course as well as learning the basics of enterprise valuation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001 or STAT 5801) and (ACCT 5001 or ACCT 5801)

**FIN 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FIN 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FIN 9001. Corp Finance Theory. 3 Credit Hours.**

This course is a rigorous introduction to the fundamental concepts and techniques used in modern financial economic research. Topics include individual investment decisions under uncertainty, stochastic dominance, mean-variance portfolio analysis, various equilibrium and arbitrage pricing models, and option pricing. Upon completion of this course, students are expected to acquire a clear understanding of the major theoretical results concerning individuals' consumption and portfolio decisions under uncertainty and their implications for the valuations of securities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9002. Empirical Research in Corporate Finance. 3 Credit Hours.**

This course covers a wide variety of topics in corporate finance, including agency theory, capital structure, signaling, executive compensation, ownership structure, boards of directors, corporate control, diversification, venture capital, financial distress, and dividend policy. The analysis is both theoretical and empirical and is based on papers from the leading journals in finance, economics, and accounting. The principal aim of the course is to prepare students to conduct empirical research in corporate finance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9003. Banking and Financial Institutions. 3 Credit Hours.**

This course covers a variety of topics on financial institutions and, in particular, the banking enterprise. Emphasis is on empirical papers. The aim is to prepare students to read the literature critically and to strengthen their independent research skills. Subjects include uniqueness of banks, exposure to interest and exchange rate risks, product diversification, contagion, market and regulatory discipline, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9004. Seminar in Global Finance and Governance. 3 Credit Hours.**

The course introduces students to the basic academic literature in global finance and governance at a doctoral level and to selected advanced topics in this area. The aim is to prepare students to read the literature critically, to strengthen their independent skills, and to help them be ready to select topic in global finance and governance and related areas. Topics will be flexible to class needs but include corporate exchange risk management, international investments, global corporate governance, firm boundaries, financial and strategic issues of multinational firms, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9005. Empirical Asset Pricing. 3 Credit Hours.**

This course is designed to help students bridge the gap between theoretical asset pricing models and the data. Students will read seminal works in empirical asset pricing, implement the methodologies in statistical exercises and produce a research paper that extends the existing literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in BA 9105 and BA 9106.

**FIN 9011. Proseminar in Finance. 1 to 3 Credit Hour.**

This course is integrated with the Finance department's external seminar series (speakers from other universities) and internal seminar series (speakers are PhD students and department faculty). Students are required to attend all seminars. They must read the paper and ask questions during each seminar. For a selected number of seminars, students are required to submit a critique of the paper within a week after the seminar.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Business Administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**FIN 9013. Alternative Investments. 3 Credit Hours.**

Alternative assets have become an increasingly important segment of the financial markets. This course analyzes various classes of alternative assets and how they are incorporated into portfolios for diversification and performance enhancement purposes. Topics include private equity, real estate, merger and arbitrage and fund of funds management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9014. Best Practices in Valuation. 3 Credit Hours.**

Corporate valuation deals with managerial decision-making covering two primary topic areas: (i) what projects should the company invest in? and (ii) how does the company finance these investments? This course will provide an in-depth understanding of the models and processes that managers use in making valuation decisions. In particular, covered topics include DCF model, multiple valuation, and transaction analysis. The course consists of a combination of in-class lectures, online material, and business/finance cases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9015. Corporate Governance. 3 Credit Hours.**

In this course, we examine the underlying theory, principles, and practices that surround the governance of modern corporations. The course focuses, in particular, on the mechanisms that shareholders use to ensure that managers maximize shareholder wealth. We will discuss such topics as boards of directors, executive compensation, large shareholders, executive termination and succession, and government regulation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9016. Derivatives and Risk Management. 3 Credit Hours.**

Financial derivatives are indispensable in today's business environments. The primary reason for the advent of derivatives has been their application to hedging and risk management. Commercial banks, investment banks, asset managers, mutual funds, hedge funds, pension funds, insurance companies, manufacturing companies, transportation companies, and energy companies are among the participants who are affected by changing conditions in the market and hence engage in risk management using derivative instruments. As the financial markets evolve and change derivatives are likely to emerge as even more vital ingredients of risk management for all kinds of corporations and businesses. The financial crisis, on the other hand, has taught us that clear understanding of derivatives and their price dynamics is ever more important now.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9017. Dissertation Methodologies. 3 Credit Hours.**

Research can follow many different methodologies in answering important and interesting questions. This class will cover the primary methodologies used in academic and practical research studies. These methodologies include: theoretical, empirical, survey, experimental, case studies, and a more general breakdown between quantitative and qualitative research. In addition to discussing and reading about the different methods, we will examine several different examples that appear in practice-based and academic-based finance journals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9018. Financial Markets and Institutions. 3 Credit Hours.**

This course provides a survey of financial markets and institutions with a strong current events perspective and emphasis on global linkages. The course will have an applied managerial perspective that focuses on both how the markets are viewed by companies who need access to funding as well as the professionals that work in the financial services industry. The course consists of a combination of in-class lectures, online material, and business/finance cases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9019. Investment Allocation and Management. 3 Credit Hours.**

This course will discuss the concepts of portfolio management within the context of individual and institutional investment portfolios. Topics include the portfolio management process and development of investment policy statements, execution of portfolio decisions, evaluation of portfolio performance and Global Investment Performance Standards. Course materials are heavily weighted toward case studies and practical applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9021. Mergers and Acquisitions. 3 Credit Hours.**

The course focuses on financial tools, techniques, and best practices used in buyouts (financial buyers) and acquisitions (strategic buyers). While we will touch upon various strategic, organizational, and general management issues, our main lens for studying these transactions will be a financial one. We will explore how different buyers approach the process of finding, evaluating, and analyzing opportunities in the corporate-control market; how they structure deals and how deal structure affects both value creation and value division; how they add value after transaction completion; and how they realize their ultimate objectives (such as enhanced market position or a profitable exit).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9022. Private Equity. 3 Credit Hours.**

Understanding the philosophy of science and conduct of scholarly applied research is fundamental for undertaking high-quality research. This course introduces students to the philosophy of scientific inquiry, common research approaches (e.g., quantitative, qualitative) and common epistemological perspectives (e.g., positivistic, interpretative, and critical research). The trade-off between scientific rigor and practical relevance is covered with emphasis on conducting rigorous research with practical implications. Students are introduced to practical issues about undertaking applied research, such as identifying a research topic, forming research questions, conducting literature review, and developing a plan for actual fieldwork and data collection. Finally, the course aims at helping students identify a personal interest in a particular type and area of applied research to undertake specific projects during their tenure as the doctoral program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9023. Real Estate Finance. 3 Credit Hours.**

This course explores real estate finance and quantitative methods that are used in the valuation of real estate. Students develop an understanding of real estate financing and valuation as well as related topics such as underwriting, risk analysis, and financial leverage. In addition, students learn about the mortgage market and the securitization process for residential and commercial mortgages. The course also includes analysis of both residential and commercial real estate markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**FIN 9090. Spec Topic Finance. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FIN 9183. Directed Study in Fin. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Foreign Language Education (Secondary) (FLED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**FLED 5429. Curriculum and Methods in Foreign Languages. 3 Credit Hours.**

Readings, theory, research, and demonstrations related to current methods and approaches for teaching foreign and second languages. Differences between learning a second language as a child, teenager, and an adult are explored. For foreign language, TESOL, and bilingual education teachers.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: EDCNDCY.

**Repeatability:** This course may not be repeated for additional credits.

**FLED 5431. Innovations in Foreign Language Education. 3 Credit Hours.**

For foreign language, TESOL, and bilingual teachers. Recent innovations or trends in foreign and second language education. Topics such as whole language, cooperative learning, authentic materials, pair and small group communicative activities in teaching the four skills, dialogue journals, jazz chants, and creating student and teacher-made materials.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: EDCNDCY.

**Repeatability:** This course may not be repeated for additional credits.

**FLED 5433. Multimedia Approaches to Teaching Foreign Language. 3 Credit Hours.**

Effective uses of various types of media in teaching all aspects of foreign and second language. Creating stimulating materials and demonstrating their use through mini-lessons. For foreign language, TESOL, and bilingual teachers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FLED 5435. Applic Res Sec Lang Ed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FLED 5437. Teaching Second Language Culture. 3 Credit Hours.**

Devoted to how to teach culture and what to include. Identifying patterns of the target culture and areas of misunderstanding between cultures. Comparisons made between one's native culture and the target culture. Materials based on mini-dramas, simulations, and nonverbal communication are demonstrated and prepared by students for classroom use. For foreign language, TESOL, and bilingual education teachers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**FLED 5460. Spec Proj Foreign Lng Ed. 3 to 6 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FLED 5470. Spec Proj Foreign Lng Ed. 3 to 6 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**FLED 8645. Sem in Sec Foreign Lang Ed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Gender, Sexuality and Women's Studies (GSWS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**GSWS 5000. Special Topics. 3 Credit Hours.**

Specific cultural, social or political topics in gender and sexuality issues with an emphasis on interdisciplinary studies. A variable topics course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**GSWS 8001. Feminist and Queer Studies. 3 Credit Hours.**

This course offers an advanced introduction to students interested in the interdisciplinary field of Gender, Sexuality and Women's Studies as well as in applying feminist and queer methods of research, analysis and practice in their own disciplines. This is a rigorous graduate course designed for Ph.D. and M.A. students pursuing the Graduate Certificate in Gender, Sexuality and Women's Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GSWS 9082. Independent Study. 3 Credit Hours.**

Independent work on a project related to Gender, Sexuality and Women's Studies supervised by a member of the Gender, Sexuality and Women's Studies Affiliated Faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GSWS 9991. Research Seminar. 1 to 3 Credit Hour.**

Students will present research on topics related to feminist and/or queer issues and/or identities. Discussions depend on common readings on what constitutes feminist and queer research and focus on an analysis and critique of the papers presented. This is a rigorous graduate course that is required for Ph.D. and M.A. students pursuing the Graduate Certificate in Gender, Sexuality and Women's Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## **Geography and Urban Studies (GUS)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**GUS 5000. Special Topic Seminars. 3 Credit Hours.**

A faculty member offers special seminars in a research specialty. Recent topics have included current perspectives on development, the information and technology needs of low resource community organizations, and information systems design and management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 5010. Special Topics in GUS. 3 Credit Hours.**

Variable content; see graduate chair for specific details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 5014. Urban Social Geography. 3 Credit Hours.**

The course acquaints students with social and cultural understandings of urban space in the U.S. city. Students are asked to use photography to explore how geography grounds itself on the landscape.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5015. Land Use Planning. 3 Credit Hours.**

This course is an examination of the forces that influence land use planning in and around American metropolitan regions. It considers economic perspectives (land values); public interest perspectives (zoning subdivision, housing and building codes, redevelopment and renewal programs, etc.); and social perspectives of land use. Also examined are separate housing, commercial locations, and industrial development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5017. Health and Environment Seminar. 3 Credit Hours.**

This course addresses the relationship between community-level characteristics, such as neighborhood socioeconomic disadvantage, with health outcomes, with an emphasis on health behaviors such as substance use, exercise, and healthy eating. Access to resources such as health services and nutritious food will be examined, as will exposure to harmful or risky environmental conditions that can promote disease. A methodological focus will address how environmental influences on health is analyzed, as well as how individual-level characteristics such as age, sex, race/ethnicity, and peer and family relationships may moderate such influences. The role of community level factors in health disparities will also be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5018. Economic Development and Planning Cities. 3 Credit Hours.**

The focus is on the causes of economic decline in American cities, history of governmental policies to promote urban economic development, and major tools available to local economic planners, with special emphasis on the political issues of who controls the programs and who reaps the benefits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5021. International Urbanization. 3 Credit Hours.**

This course examines urbanization around the world. The focus may include issues of rapidly industrializing areas, as well as postcolonial and transition societies. Students address topics related to the effects of rapid social and spatial change in a variety of settings. They also examine the problems of providing housing and urban infrastructure in rapidly urbanizing areas, as well as the social and cultural tensions related to urban change.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5031. GIS Programming. 3 Credit Hours.**

Building on previous coursework with Geographic Information Systems (GIS), students will learn computer programming in a GIS environment. Students will design and execute spatial data management and spatial analysis projects using automated geoprocessing functions available in the built-in scripting languages of prominent GIS software packages, with an emphasis on the Python programming language. Students will learn programming concepts such as variable typing, function definition, conditional evaluation, looping, and object-oriented programming. The course will also introduce geospatial programming strategies independent of any specific GIS software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 5032. Geosimulation. 3 Credit Hours.**

Geosimulation (or spatial simulation) "is a catch-all phrase" that can be used to represent an emerging stream of spatially-explicit simulation models, often being computationally intensive. Developed at the confluence of geographic information science and computer science, geosimulation incorporates different computational systems such as cellular automata (CA) and agent-based modeling (ABM). This course will explore the conceptual, developmental, implementational, and evaluation aspects of these different simulation modeling systems. We primarily focus on cellular automata, agent-based systems, neural networks, and expert systems using geographical data, (hence spatially-explicit models). Simulation models developed using these techniques are used to investigate patterns and processes of complex systems in different topical areas such as urban growth, climate change, migration, birds and animal movements, environmental health, and conservation. This course builds upon the concepts introduced in Fundamentals of GIS, GIS Programming and other GIS courses offered by the department. The course structure will consist of lecture, class discussion, and lab activities. Students will be expected to read academic and professional literature and to actively participate in and lead class discussions. Students will also be expected to develop a final project on geosimulation modeling topic. Preferably, they will develop and implement a CA or ABM model of their own.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062 and GUS 5031.

**GUS 5033. Urban Analytics. 3 Credit Hours.**

With the increase of data availability and the computing power together with advanced data analytics, the data driven approach becomes a more objective and scientific way for us to understand the urban system for solving the social, economic, and environmental challenges in cities. Knowledge and skills for collecting and analyzing urban spatial data become an essential skill for urban researchers. This course will teach students the concepts, techniques, and analytical methods for urban analytics. Methods for collecting, storing, processing, analyzing, and visualizing various types of urban data using programming will be taught in this course. Examples of real urban analytics applications will be introduced in this course in order for students to get the practical skills in handling urban spatial data. The course is designed for students who have programming experience and want to reinforce the knowledge and skills and learn advanced topics in urban informatics and urban data analytics for solving urban issues. This course includes lectures and lab exercises. The knowledge and skills learned in this course further prepare students for an emerging career in smart city, data science, GIS, urban planning, and environmental management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 5034. Applied Machine Learning for Spatial Analysis. 3 Credit Hours.**

Machine Learning (ML) is a branch of artificial intelligence that enables computer systems to learn from data and improve their predictive capacity without explicit human intervention. ML algorithms are growingly being applied to solve complex spatial problems due to their ability to efficiently process large, high-dimensional datasets, improve predictive capacity and reveal hidden patterns in data. This course provides conceptual foundations, methods and analytical skills for the application of broadly used machine learning methods to geospatial analysis. The course will enable students to become familiar with basic definitions, conceptual foundations and applications of different machine learning methods. Students will become familiar with the main steps related to the conception, development, evaluation and interpretation of predictive models using machine learning methods. Students will also learn basic computer programming skills for spatial data integration and their use for the calibration and evaluation of spatial machine learning models. Students who took GUS 5074: Applied Machine Learning for Spatial Analysis may not take this course for additional credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (GUS 3062 or GUS 5062) and GUS 5161.

**GUS 5041. Sustainable Natural-Human Systems. 3 Credit Hours.**

This course provides the scientific basis and theoretical background for understanding the most essential challenges to address sustainability in natural-human systems. The course will provide knowledge about theories, conceptual frameworks and research methods to understand and appreciate the interactions and co-dependencies between human and natural systems. The course will also introduce students to the main global research and policy agendas to understand and address sustainability in natural-human systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5042. Climate Change and Security. 3 Credit Hours.**

Climate change is widely understood by a range of state and non-state actors to pose significant security risks, but the relationship between climate change and security is much more complex than simple cause and effect. Researchers from diverse fields are actively engaged with questions about what kinds of security are threatened by climate change and through what mechanisms. For example, will severe drought lead to violent conflict? What are the consequences of viewing a problem as a livelihood versus national security risk? Who are the winners and losers of climate change-based security interventions? This course orients students to the evolving debate on the relationship between climate change and its impacts on national, human, and environmental security.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5043. Black Geographies. 3 Credit Hours.**

This course explores theoretical and methodological advances made by the interdisciplinary field of Black geographies. Texts and discussions will draw on the discipline of geography along with theorizing from Black studies, Black feminism, queer studies, anthropology, sociology, and political science to highlight how erasures, exclusions, and exploitations of Black people have structured historical and current world conditions. The course will center lessons from Black knowledges, radical struggles, and everyday life practices as a guide for scholarship and action aimed toward reshaping a new, more just world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5044. Urban Housing. 3 Credit Hours.**

An overview of the economic, social, physical, and political forces that have molded the present urban housing stock is provided. Also examined are the implications of present urban housing stock, implications of present trends for the future, and the development of rational housing policies, emphasizing the Philadelphia metropolitan area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5051. Environmental Hazards and Disasters. 3 Credit Hours.**

Natural and technological hazards are the focus for this course. We review the evolution of theoretical and applied conceptualizations of "hazard" and hazard vulnerability, examine the human dimensions of the resultant hazardscapes, and look to past, present, and anticipated "cases on the ground." Our emphasis is on geographical approaches, but this can be read as a broadly interdisciplinary perspective, as is typical of most geographical analysis. Among the varied issues we may take up are metropolitan impacts of climate change, coastal vulnerability, nuclear hazards, seismic threats, and public health threats associated with disease, hunger, and nutrition. Global, as well as U.S. and local perspectives, are integral to the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5056. Political Ecology. 3 Credit Hours.**

Political ecology is an integrated, interdisciplinary approach to the study of human-nature relations. This course examines resource use, the construction of landscapes, questions of structure-agency, and definitions of "nature" and "development." We study cases at a variety of spatial scales and settings, and include examples from industrialized countries as well as non-industrialized regions. Topics are diverse, ranging from subsistence fishing to access to green spaces in cities. The critical roles of the state, non-governmental organizations, and individual actors in shaping social, political, and economic landscapes are considered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5061. Cartographic Production. 3 Credit Hours.**

This course presents advanced approaches to design and production of thematic maps.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5062. Fundamentals of Geographical Information Systems. 3 Credit Hours.**

This course prepares students with the knowledge necessary to effectively use GIS software packages, and covers fundamental principles such as spatial data models, database management systems, network modeling and geo-coding, and basic vector and raster operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5063. Remote Sensing. 3 Credit Hours.**

This course introduces students to the most basic concepts and skills for downloading, exploring and processing satellite data for broad remote sensing applications. The course is designed to guide students through the most relevant steps required from acquisition to production for the application of remote sensing to agriculture, forestry, ecology and hydrology, as well as for characterizing and assessing changes in urban and rural landscapes and in seascapes. The course will include weekly lab sessions that will allow students to apply the concepts and procedures learned in class and improve their skills on the use and application of remote sensing information.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (GUS 3062, ENST 3062, or GUS 5062)

**GUS 5065. Urban Geographical Information Systems. 3 Credit Hours.**

Assuming basic familiarity with Geographic Information Systems, this course focuses on applying GIS techniques to the study of such processes as urban sprawl, socioeconomic change, and ecological functioning of urban regions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 5066. Environmental Applications of GIS. 3 Credit Hours.**

Geographic Information Systems are widely used to investigate environmental processes and to develop solutions to environmental issues. This course will build upon concepts introduced in Fundamentals of GIS to investigate how the techniques, data, and interpretations from GIS analysis are applied across a variety of environmental fields. Topics to be covered include natural hazard vulnerabilities, global climate change, renewable energy potential, environmental health, and conservation. The course structure will consist of lecture, class discussion, and GIS-based lab activities. Students will be expected to read academic and professional literature and to actively participate in and lead class discussions. Students will also be expected to develop a final project on an environmental topic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 5067. GIS and Location Analysis. 3 Credit Hours.**

This course examines the concepts and techniques of location analysis - how to 1) describe the spatial arrangements of features on the earth's surface and 2) prescribe the best location or spatial arrangement of features for a particular activity - for economic and social service applications. The course introduces concepts in Geographic Information Systems (GIS) and spatial statistics to address issues of location.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5068. Census Analysis with Geographical Information Systems. 3 Credit Hours.**

Students gain an understanding of U.S. census geography and tabular data through the use of GIS. Activities, discussions, and lectures familiarize students with U.S. Census Bureau data, while lab assignments and exercises provide experience using GIS to analyze real world problems. By the end of the semester, students will have learned a variety of advanced GIS techniques and be able to make effective use of census data for academic research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5069. GIS for Health Data Analysis. 3 Credit Hours.**

Geographic Information Systems (GIS) has emerged as an essential tool for the analysis of health and disease data. This course provides an introduction to the most common geographic methods used for mapping and analyzing health disparities, disease risk factors, health services and geographic variation in health outcomes and disease. Through lecture and laboratory exercises students will learn how to create and edit spatial data, create disease maps, develop neighborhood-based measures, conduct geographic cluster detection and point pattern analysis, locate and map geographic health disparities, measure geographic access to health services, and critically assess potential study bias introduced from missing geographic data or positional accuracy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5071. Health Geography. 3 Credit Hours.**

This course offers an analysis of the factors responsible for the geographic patterns of disease, mortality, and health care services: the role of the environment in evaluating mortality and disease patterns. NOTE: This course was previously titled "Medical Geography." Students who complete this course under the new title will not receive additional credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5072. Advanced Remote Sensing. 3 Credit Hours.**

This hands-on course will provide skills and knowledge for the effective and efficient processing and analysis of satellite data for advanced applications with emphasis in the application of remote sensing for detecting and monitoring socio-environmental changes. The course will include a semester-long project where students will apply the concepts and procedures learned to their own research or a particular topic of their interest. Students will learn programming skills for effective and efficient processing of remote sensing data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (GUS 3063, ENST 3063, or GUS 5063) and (GUS 3062, ENST 3062, or GUS 5062)

**GUS 5073. Geovisualization. 3 Credit Hours.**

Maps can be powerful devices for communication, but also tools for exploration of relationships among social and physical processes manifesting in space. This computer-intensive course will focus on this dual purpose of maps as tools for visual communication and visual thinking. You will create data-driven products that combine geographic and statistical visualizations for static, interactive, and animated display. Previous experience with a programming language will be helpful. A previous course in cartography is recommended but not required. Heavy emphasis on open source tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (GUS 3161 or GUS 5161)

**GUS 5075. Regional Development. 3 Credit Hours.**

This course examines the transformations, beginning with the European expansion 500 years ago, that have, to a large extent, created the regional variation we see today. Theoretical approaches to understanding "modernization" and "development" are considered. This foundation is then built on to look at the historic factors that have shaped different parts of the world. Examined are the political, economic, social, spatial, and environmental processes that have shaped those countries that share a colonial past (our primary focus) as well as North America, Asia, Japan, and Eastern Europe.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5096. Problems in Environmental Quality. 3 Credit Hours.**

Local urban environmental problems are considered by members of the class in research teams, with a view toward seeking possible solutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5097. Race, Class, Gender in Cities. 3 Credit Hours.**

This research seminar examines the spatial dimensions of metropolitan inequality, focusing on how inequality is perpetuated along race, class, and gender lines. Topics include urban growth politics, zoning and land use planning, domestic architecture, racial segregation, poverty, and homelessness. Students design a research proposal based on course materials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5159. Geographic Inquiry. 3 Credit Hours.**

This course familiarizes students with the theoretical, conceptual, and methodological debates underlying the use of spatial analysis in the social sciences. Students explore how place, space, and scale are conceptualized and utilized to examine urban processes as well as different approaches to spatial representation, including visual, mathematical, digital, and cognitive.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5161. Statistics for Urban Spatial Analysis. 3 Credit Hours.**

This course provides an introduction to statistical analysis of spatial phenomena and processes with an emphasis on urban applications using a variety of economic, demographic, health, crime, and environmental data sets. The course covers the basic principles of sampling, probability, and tests of significance; spatial exploratory data analysis (SEDA); measures of association; ordinary least squares regression; and factor, principal component, and cluster analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5162. Advanced Statistics for Urban Applications. 3 Credit Hours.**

This course teaches advanced statistical methods to examine urban processes and patterns. The course covers spatial point pattern analysis, multivariate regression, logit and probit regression, spatial econometrics, Geographically Weighted Regression (GWR), and hierarchical linear modeling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** GUS 5161.

**GUS 5163. Qualitative Methods. 3 Credit Hours.**

This course is designed to foster an understanding of the principles and appropriate application of qualitative methods in Urban Studies. It provides an overview of qualitative research design and emphasizes the connections between grounded theory, explorative inquiry, and thick description. Specific skills that are introduced include participant observation, in-depth and open-ended interviewing, oral histories, case study analysis, focus groups, narrative analysis, content analysis, archival analysis, and social action methods. The course examines the limitations and advantages of qualitative approaches, triangulation with quantitative methods, and ethical issues in conducting research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5165. Community Based Program Evaluation. 3 Credit Hours.**

The course focuses on how to design and conduct evaluation plans that are useful for improving community-based human service and educational programs, as well as the challenges encountered in conducting evaluations in real world settings. A major emphasis is on the various methods and issues involved in conceptualizing, planning, conducting, and utilizing program evaluations. Among the topics covered are logic models and program theory, evaluability assessment, needs assessment, and process and outcome evaluation design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5304. Food Studies. 3 Credit Hours.**

This course introduces students to key issues in food systems from a geographical and environmental perspective. The course begins with an overview of what constitutes a food system and critically examines agricultural transitions that took place over the last century, including the erasure of nondominant rural imaginaries. After, the course turns to look at issues of food security, access and control, focusing our attention to the question of how to produce more just food systems. We end with an exploration in critical nutrition and food-body relationships.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 5307. Transportation and Culture. 3 Credit Hours.**

Students will learn to approach the modern geography of transportative possibility from a critical standpoint. Rather than accepting this contemporary geography as being the outcome of supposedly "superior" transport technologies' rendering marginalized technologies obsolete, students will examine how processes of cultural and political struggle have shaped, opened up, and in some cases limited the modern array of possibilities for human mobility. Waterborne, animal-based, and human-powered modes of transportation will receive special attention, as will ongoing debates and struggles over automobile planning and urban mass transit. The history of transportation will be presented as necessarily entangled with parallel histories of public protest, political struggle, emergency logistics, human-animal relations, and environmental geography. The course readings will look at many parts of the world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8006. Geographic Thought. 3 Credit Hours.**

This course reviews current concepts and methods used in geographic and urban interdisciplinary research. The major goals are to have students trace the pedigree of their research interests and develop a bibliography of essential readings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8010. Geographic Inquiry. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8011. History and Theory of Urban Studies. 3 Credit Hours.**

This course provides students with the foundational knowledge to pursue graduate studies in the interdisciplinary field of Urban Studies. It surveys the historical and philosophical bases of contemporary urban studies and provides an introduction to contemporary explanatory frameworks and associated critiques in the social sciences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8016. Public Policy for Urban Regions. 3 Credit Hours.**

This course introduces students to the major policy approaches used to sustain and develop cities and regions in the United States and beyond - i.e., direct government intervention, market models, and third sector institutions. The course examines the changes brought about by globalization in the scope and function of governments, including regulatory regimes and privatization of services and infrastructure. Students analyze the consequences of different policy approaches for social equity, environmental sustainability, and economic growth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8021. Geography of Urban Services. 3 Credit Hours.**

The course provides an analysis of concepts basic to understanding spatial service patterns and emphasizes use of models in service area delineation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**GUS 8031. Critical Issues in Globalization, Sustainability, and Social Justice. 3 Credit Hours.**

This course explores the theories, facts, and debates related to globalization, sustainability, and social justice, the themes that are critical to understanding contemporary urban conditions and dynamics. It provides students with an overview of a wide range of issues, in a number of U.S. and international settings, and at several spatial scales. The material is foundational for making decisions on research topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8033. Urban Economic and Spatial Structure. 3 Credit Hours.**

This course provides an introduction to the analysis of urban economic and spatial structure. Key ideas from urban economic theory (comparative advantage, scale economies, location economies, urbanization economies, clustering, increasing returns) are introduced. They are combined with key ideas from trade theory (transportation cost and globalization) and the impact of federal, state, and local government policies on creating and changing internal structures of cities and their consequences for access and distribution in fragmented metropolises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8043. Seminar on Homelessness in America. 3 Credit Hours.**

This course explores various issues relating to homelessness, with a focus on public policy and research. A dominant theme is how public policy decisions have contributed to this problem. Topics are the experience of being homeless, the epidemiology of homelessness, structural and individual theories of homelessness, the history of homelessness in the United States, substance abuse and mental illness among the homeless, homeless women and children, homelessness in Philadelphia, and public policies needed to address the problem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8045. Poverty and Employment. 3 Credit Hours.**

The course examines the relationships among the globalization of the economy, economic restructuring, metropolitan labor markets, and poverty focusing on contemporary U.S. cities. It evaluates theoretical and public policy debates about employment and poverty. Particular attention is paid to how class, gender, and racial inequities are reproduced in the urban economy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8047. Comparative Urban History. 3 Credit Hours.**

The course reviews methodological tools for comparative readings and research on the history of cities, across cultural and chronological boundaries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8050. Environmental Seminar. 3 Credit Hours.**

This course examines the ecological consequences of contemporary economic development. Focus is on countries at the low end of the developmental scale in Latin America, Africa, and South Asia. The course illustrates through case studies how changes in the relations of production give rise to increasing degradation of resources.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may be repeated for additional credit.

**GUS 8055. Sustainable Cities. 3 Credit Hours.**

This course introduces the concept of sustainability and explores environmental problems linked to urbanization, drawing on historical analysis, social theory, landscape ecology, and city planning/design practice. Primary topics covered include social and economic drivers of urban development and suburban sprawl; the principle of carrying capacity; the measurement of landscape-scale ecological function (e.g., habitat fragmentation); and the use of decision support tools to generate alternative policy scenarios for urban sustainability planning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8061. Big GeoSpatial Data. 3 Credit Hours.**

In Big data era, knowledge and skills for collecting and analyzing big spatial data become an essential skill for spatial data scientists. This course will teach students the concepts, techniques, and analytical methods for big spatial data. Methods for storing, processing, analyzing, and visualizing various types of big spatial data using cloud computing and advanced Python programming will be taught in this course. Examples of real big spatial data applications will be introduced in this course in order for students to get the practical skills in handling big spatial data. The course is designed for students who have programming experience or have finished GUS 5031 (GIS Programming) previously and want to reinforce the programming skills and learn advanced computing skills for solving big geospatial data problems. This course includes lectures and lab exercises. The knowledge and skills learned in this course further prepare students for an emerging career of Spatial Data Science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5031.

**GUS 8065. Cartographic Design. 3 Credit Hours.**

This course introduces students to computer-based cartographic design for both online and paper publishing. Principles of cartography including symbolization, layout, color, and typography will be applied to the creation of reference maps and thematic maps. Strong emphasis on achieving eye-catching, informative, and unambiguous visual communication through the use of industry-standard GIS and graphic design software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8066. Application Development for Geographic Information Systems. 3 Credit Hours.**

This course introduces students to geospatial software development through the creation of standalone software applications and plugins that add new functionality to major GIS software products. The emphasis will be on geospatial algorithms and object-oriented programming. Other topics in software design will be addressed including documentation, version control, user interface design, software testing, and software project management. The course will be taught using Python, JavaScript, or another major programming language with strong geospatial support. There will be a heavy emphasis on Free and Open Source Software, and active participation in the developer community outside of the classroom. At the end of the course students will have produced fully functioning geospatial software, shared their code to a public online repository, generated documentation, and promoted their work publicly.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062 and GUS 5031.

**GUS 8067. Spatial Database Design. 3 Credit Hours.**

The focus of this course is on the design and management of spatial databases. Topics covered include the database design process, spatial storage and access methods, relational and object-relational database models, and spatial query languages. Students will learn fundamental spatial database design concepts as well as their implementation and application within geographic information systems (GIS). Emphasis is placed on developing skills necessary for management of both desktop and enterprise-wide GIS databases. At the end of the course students are expected to know how to design relational and object-relational schemas for GIS databases, implement database designs in spatial database management systems (DBMS), and retrieve and manage spatial data in a GIS database.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 8068. Web Mapping and Map Servers. 3 Credit Hours.**

In this course, students will explore theoretical and practical concepts of Web GIS (Internet GIS). From a theoretical perspective they will study about advantages and techniques for publishing, visualizing and accessing maps on the Internet including architecture of Web GIS/Web mapping systems, markup languages (e.g. HTML, XML, SVG and GML), a scripting language, screen cartography, data sharing and geoportals, spatial web services and OGC standards. From a practical perspective they will learn to develop Web GIS/Web mapping applications including static and interactive web mapping systems. They will also learn and work with some famous open source software and libraries for developing a Web GIS.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 8069. GIS Ethics and Professional Practice. 3 Credit Hours.**

The focus of this course is on the ethical use and application of spatial data and geographic information systems and technologies. Topics covered include overviews of the geospatial industry and GIS profession, issues of spatial data sharing, the maintenance of privacy, and laws applicable to spatial data and GIS. Students will learn about the primary GIS industry sectors and professional organizations, and the codes of ethics and codes of conduct associated with being a GIS professional. A variety of case studies presenting ethical issues relating to the ethical use and application of spatial data and GIS are presented and discussed throughout the semester as a vehicle for exploring issues of ethics and professional practice. At the end of the course students are expected to be able to define the GIS industry, its sectors, and its workforce; explain the legal and ethical issues germane to the GIS profession; demonstrate familiarity with potential ethical challenges presented to GIS professionals; and understand how established codes of ethics and conduct apply to the GIS profession.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 8097. Research Design. 3 Credit Hours.**

The goals of this course are to provide students with an understanding of the basic concepts underlying different spatial approaches to research design and analysis. The course emphasizes fundamentals of designing investigations using a variety of methods and data to better understand urban processes, problems, and topics. Students learn to critically evaluate and conduct research, formulate meaningful research questions, design studies using different research methods, and develop a rigorous research proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8113. Community-Based Research. 3 Credit Hours.**

This course deals with applied, empirical research experience on issues affecting communities, often in the Philadelphia region. Students conduct research projects in collaboration with community organizations working for a more sustainable future. The course includes the study of contemporary environmental issues, broadly defined, and training in ethical community partnerships, research methods, applied research techniques, report writing, and engaging in community-driven research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 8985. Teaching in Higher Education: Social Sciences. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GUS 9082. Independent Study: Geography and Urban Studies. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9083. Readings in Geography. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9085. Internship in Geography and Urban Studies. 3 Credit Hours.**

The internship provides on-the-job training for graduate students with local consulting firms, planning commissions, community organizations, and various state, local, and federal government agencies in the Philadelphia metropolitan area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9086. Internship Paper. 1 to 6 Credit Hour.**

Students complete a summary paper that is based on their experience in the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9087. Mapping Practicum I. 3 Credit Hours.**

Students are assigned cartographic projects and encouraged to plan, design, and execute them for faculty and those from outside firms and planning agencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9187. GIS Capstone. 3 Credit Hours.**

The GIS Capstone course provides an experiential learning experience for students matriculated in the Professional Science Master's in GIS program at Temple. Students engage in a structured internship experience (140 hours during the semester), identified with the guidance of PSM faculty at Temple and a prospective employer. The student will complete a GIS-oriented project during the internship that draws on the GIScience and professional skills developed through the PSM curriculum. Student performance will be evaluated based on three criteria: 1) employer report of student performance during the internship, 2) student presentation of project, and 3) student-submitted report of project. The projects will be presented to PSM faculty and students at the conclusion of the semester and reports will be made available to employers and members of the Advisory Board. This course is required for all students matriculated in the GIS PSM at Temple. Students are expected to complete 140 hours of internship experience during the semester and to participate in an online course to reflect on their experiences during the internship. Students **MUST** have their internship opportunity approved by the instructor prior to the start of the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GUS 5062.

**GUS 9991. Master's Research Paper. 3 Credit Hours.**

Students develop a high-quality research paper on a topic of their choice. Students connect the development of their paper to their work within a specific course as a means of facilitating their project. Students also work with an individual advisor to develop the content, implement the project design, and approve the final paper.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9994. Doctoral Qualifying Examination. 1 Credit Hour.**

Preparation for the preliminary examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9996. Masters Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9998. Dissertation Proposal. 1 to 3 Credit Hour.**

Preparation of the dissertation proposal in consultation with the primary dissertation supervisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**GUS 9999. Dissertation Research. 1 to 6 Credit Hour.**

After passing the Qualifying Exam, continuous registration in 9999 during the Fall and Spring semesters is required until the dissertation is successfully defended. One credit is the minimum required each semester after the proposal defense and while the student is researching and writing the dissertation. A minimum of 6 s.h. of GUS 9999 must be taken before one can secure the Ph.D. degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Globalization and Development Communication (GDC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**GDC 8001. Seminar in Media, Communication and Development. 3 Credit Hours.**

This intensive seminar consists of twelve sessions providing an introduction to the program and an overview of the historical roots, political influences, institutional arrangements, and cultural considerations that have shaped and defined the field of development communication. This course prepares each new cohort of students for the rigors of the program by equipping them with a solid foundation in history and trajectories of development communication theory and practice. Throughout the seminar, participants are immersed in key readings and engage in a range of activities designed to foster a deeper theoretical and critical understanding of the issues covered. By the end of the course, students are able to take full advantage of the programs/s curriculum by proposing a specific program of study including which specialization they will pursue. NOTE: This 3 credit hour course will only be offered during the three weeks prior to each fall semester (12 meetings total, 3 contact hours per meeting), and is for incoming students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GDC 8002. Communication for Social Change Project Design. 3 Credit Hours.**

Recognizing the power of communication as a catalyst for social change, this course focuses on how development communication projects intended for a specific target audience are designed, managed and refined. The course also provides instruction in project monitoring and evaluation, decision-making tools, and human resource management as related to key aspects of development communication, such as behavior change, social marketing, social mobilization, media advocacy, and participatory development communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in GDC 8001.

**GDC 8003. Research Approaches in Communication, Development and Social Change. 3 Credit Hours.**

This course provides a hands-on approach to learning a series of research methods and fieldwork approaches used in the field of communication, development and social change. Students will learn different strategies to conduct fieldwork in marginalized communities, including participatory research and action research. The course focuses on practical research skills including how to formulate research questions, gather primary and secondary data, complete formative and summative research reports, and develop qualitative and quantitative data analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GDC 8089. Field Experience. 3 Credit Hours.**

The Field Experience is a custom-designed course that provides the opportunity for Globalization and Development Communication (GDC) students to apply course work to practice and/or research experiences. Field experiences can include internships with governmental and non-governmental organizations, research projects with socially responsible businesses, and participation in community development initiatives or media productions for social changes that allow students to acquire knowledge and new skills and become more reflective development practitioners. NOTE: This 3 credit hour course takes the form of a "hybrid," with students meeting with the instructor during several days of the "Maymester" term and completing their field experiences independently during the summer under the supervision and evaluation of the course instructor. The course is for outgoing GDC students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in GDC 8002.

**GDC 9995. Master's Research Project. 3 Credit Hours.**

The Master's Research Project a field-based course provides the opportunity for Communication and Development for Social Change to apply coursework to practice and research experiences. Research projects can include internships with governmental and non-governmental organizations, investigative projects with socially responsible businesses, participation in community development initiatives, or media productions for social changes that allow students to acquire knowledge and new skills and become more reflective development practitioners. Note: This 3 credit hour course takes the form of a "hybrid", with students meeting with the instructor during several days of the early summer term and completing their field experiences independently during the summer under the supervision and evaluation of the course instructor. The course is for outgoing GDC students.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Globaliztn & Dev Communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Graduate Advanced Education and General Dentistry (ADVG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ADVG 9085. Advanced Education in General Dentistry I Clinical Practice. 9 Credit Hours.**

Clinical experience and documentation in diagnosis, treatment and prevention of dental diseases, and oral health maintenance care. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ADVG 9185. Advanced Education in General Dentistry II Clinical Practice. 9 Credit Hours.**

Clinical experience and documentation in diagnosis, treatment and prevention of dental diseases, and oral health maintenance care. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Graduate Endodontic (ENDG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ENDG 8111. Pain in Dentistry: Diagnosis and Control. 2 Credit Hours.**

Pathophysiology of orofacial pain, including transmission mechanisms, role of neurotransmitters and neuroregulators, neurology and classification of head and neck pain, differential diagnostic procedures, and a survey of pain control measures. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8112. Pulp Biology. 2 Credit Hours.**

Development, structure, histology, biochemistry, and physiology of tooth pulp tissues in health and disease. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8113. Periapical Biology. 2 Credit Hours.**

Development, structure, histology, biochemistry, and physiology of the tooth root apex and surrounding periapical tissues in health and disease.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8114. Biologic Basis of Disease. 2 Credit Hours.**

Basic biologic structures and processes underlying growth and destruction of human body tissues, including fundamentals of acute and chronic inflammation, the complement cascade, mechanisms of cell-mediated and humoral immune responses, ligand-cell receptor complexes, and receptor diseases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8115. Current Clinical Concepts. 2 Credit Hours.**

In this course, students learn to describe the characteristics and variations of ideal root canal access using proper instruments as well as the details of floor anatomy and the location of orifices. They will gain the ability to analyze, synthesize and evaluate data and knowledge related to various aspects of clinical endodontics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8116. Endodontic Microbiology/Immunology. 2 Credit Hours.**

Microbial structure, genetics, disinfection/sterilization, immunology, biology, and virulence relative to pulpal and periapical infections.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8117. Systemic Diseases. 1.5 Credit Hour.**

The student will be able to understand the significance of how different diseases and medical conditions may impact Endodontic treatment and prognosis, appreciate the relevance of an understanding of different diseases and medical conditions, and thoroughly learn and discuss the different diseases and medical conditions that may be encountered in treating their patients.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8118. Endodontic Microsurgery. 2.5 Credit Hours.**

This course enables students to understand the rationale for different surgical procedures, adequately and competently perform various endodontic surgical procedures, have a thorough knowledge of the different types of flap designs, and have a complete understanding of how and when to use the different types of guided tissue and bone regeneration materials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8119. Teaching for Sophomore Preclinical Lab. 2 Credit Hours.**

The graduate students participate in teaching the sophomore students in hands-on endodontics prior to their entry into the clinic. This is done on a weekly basis in the Spring semester

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8120. Clinical Seminar in Endodontology. 2 Credit Hours.**

Students will become proficient in presenting evidence-based cases at the level of expectation/standard of the American Board of Endodontics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENDG 8122. Dental Traumatology. 1 Credit Hour.**

Upon completion of this course, the student should be able to classify, provide a comprehensive treatment regimen, and provide opportunities for analysis, synthesis, and evaluation of data and knowledge on the different types of dental injuries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8123. Endodontic Methods and Materials I. 2 Credit Hours.**

This course is intended to provide the student with a deep appreciation in Endodontic methods and materials, and obtain knowledge in the various materials and methods used in clinical endodontics, and differential interpretation of lesions and normal anatomic structures through radiographs or digital images; understand and be familiar with all the medicaments and obturation materials that are being used in endodontics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8124. Endodontic Methods and Materials II. 2 Credit Hours.**

This course is intended to provide the student with a deep appreciation in Endodontic methods and materials, and obtain knowledge in the various materials and methods used in clinical endodontics. Provide the student with the deep appreciation with the outcomes of endodontic treatment, and understand the relationship between endodontics and other dental specialty such as orthodontics, periodontics, and pediatrics.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8130. Current Endodontics Literature Review. 1 Credit Hour.**

Critical review of recent basic science and clinical literature pertinent to endodontics. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENDG 8131. Endodontic Topics I. 2 Credit Hours.**

This course contains the following major topics: 1) Endodontic microbiology, 2) Inflammation, 3) Traumatic injury of the teeth. This course is intended to provide the student with a deep appreciation of the nature of microorganisms, and their role in pulpal and periapical disease; with a profound understanding of the biologic structures and processes underlying the growth and destruction of the tissues of the human body; understand the use of antibiotics in Endodontics; and obtain knowledge of various types of traumatic injury of teeth and their management.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8132. Endodontic Topics II. 2 Credit Hours.**

This course contains the following major topics: 1) Systemic diseases and endodontics, 2) Essential endodontic literatures, 3) Pain and management, 5) Tooth with open apex. This course is intended to provide the student with a deep appreciation of common systemic diseases and their correlations with endodontic diseases, as well as their impact on the outcomes of endodontic treatment; help the student understand the essential and classic endodontic literatures; provide the student with a deep appreciation of nature of dental pain, especially the endodontic pain; and also learn how to manage the tooth with open apex that has endodontic disease.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 8140. Classical Endodontics Literature Review. 1 Credit Hour.**

Critical evaluation of classical scientific literature in endodontics and pulp biology. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENDG 8212. Pulp Biology II. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ENDG 8213. Periapical Biology II. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ENDG 9185. Emergency Endodontics Clinic. 3 Credit Hours.**

Everyday, two endodontic students are assigned to emergency duty to perform emergency Endodontic procedures. This is done on a rotation basis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**ENDG 9285. Endodontics Clinic. 1 to 12 Credit Hour.**

This course focuses on the treatment of patients in the clinic. The student is expected to demonstrate graduate level of proficiency in Endodontic diagnosis, treatment skills, and management of patients. Special clinical emphasis is placed on endodontic re-treatment, periapical surgery, and contemporary management of complex and/or refractory endodontic lesions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Graduate Orthodontics (ORTG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ORTG 8400. Diagnosis and Treatment Planning Conference. 4 Credit Hours.**

The student will be exposed to a different case each conference. There will be discussion on the diagnosis, treatment goals, treatment plan and the treatment mechanics. Each student will be expected to demonstrate critical and original thinking. The discussions will be evidenced based. Ethics of the resulting treatment plan and the treatment will also be incorporated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8401. Orthodontic Technique Lab. 1 to 6 Credit Hour.**

This course is designed for the entering graduate student to learn the essential principles of orthodontic appliances utilizing the typodont. The typodonts are occluded on a hinge articulator to simulate the typical malocclusion(s). Students bend wires and apply auxiliary force modules to move the teeth to correct the malocclusion. This course is augmented by introduction and discussions of orthodontic instruments, use of extraoral appliances, wire properties, an overview of engineering principles of orthodontic mechanics as indicated in the course schedule. Students will be assigned readings to prepare for the day's agenda. Moreover, this course is the entering students' first exposure to the graduate orthodontic curriculum; and sessions take up the entire day. Thus, the intense one-on-one time spent with the instructors, and senior residents is also critical for transition into the rest of the curriculum. The principal goal of this course is to train the beginning resident in the techniques and use of orthodontic appliances. Course prerequisite: enrollment in the Year 1 of graduate orthodontic specialty program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8402. Orthodontic Principles and Techniques. 1 Credit Hour.**

This Principles of Orthodontics course is a seminar and independent study course that provides a review of orthodontics and its history. It includes discussions of essential literature on the nature of orthodontic specialty and introduces the student to orthodontic data collection, software, and patient management. Included in the topics of instruction are history of orthodontics, essentials of making various impressions, 2D and 3D imaging technologies, orthodontic insurance, and photography. Students are assigned to make PowerPoint presentations in various topics in orthodontic history. The course sessions are conducted as lectures and seminars where students, who have previously read and independently studied the assigned reading materials, will discuss, provide summary statements, critical analysis, and answers to questions in roundtable discussions led by attending faculty members serving as seminar leaders. Course prerequisites: enrollment in Year I of the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8403. Orthodontic Diagnosis and Treatment Plan Seminar. 2 Credit Hours.**

Essentials of orthodontic diagnostic process and treatment planning are discussed in this course. Examples of topics of discussion include cephalometric headfilms and their numerous analyses, treatment timing, surgical orthodontics, interdisciplinary orthodontics, and occlusion and TMJ. The course sessions are conducted as lectures and seminars where students, who have previously read and independently studied the assigned reading materials, will discuss, provide summary statements, critical analysis, and answers to questions in roundtable discussions led by attending faculty members serving as seminar leaders. Every attending will have his/her own treatment philosophy. The student is expected to utilize the information gained in this course for clinical activities. Course prerequisites: enrollment in Year I of the graduate orthodontic specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8404. Orthodontic Biomechanics. 2 Credit Hours.**

Biology and engineering mechanics of orthodontic and orthopedic forces applied to human orofacial structures. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8405. Dymorphology. 1 Credit Hour.**

Study of biologic basis, classification, and management of human craniofacial anomalies and syndromes, with emphasis on cleft lip and palate. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8406. Teaching Principles. 2 Credit Hours.**

In this course the student is exposed to teaching and mentoring activities. Teaching and mentoring activities take place in the predoctoral and postdoctoral facilities. The graduate program is heavily dependent on the big brother/sister system. In the predoctoral clinic the resident will serve as the instructor. In the graduate program, the student will mentor the little brother/sister for diagnosis, treatment planning, paperwork, patient management, and the like. Course prerequisites: enrollment in the graduate orthodontic specialty program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8407. History of Orthodontics. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8408. Craniofacial Cephalometrics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8410. Current Literature Review. 1 Credit Hour.**

Critical review of selected recent basic science and clinical research papers in orthodontics and craniofacial biology. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8413. Operations Management for Orthodontic Practice I. 0 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8414. Growth and Development of the Craniofacial Complex. 2 Credit Hours.**

Fundamental biological and genetic mechanisms of normal human craniofacial growth and development, including neural crest contributions, epithelial-mesenchymal interactions, postnatal craniofacial development, and somatic growth in children.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8416. Clinical Biomechanics. 1 Credit Hour.**

The Clinical Biomechanics course is a seminar and independent study course providing an evidence-based, in-depth, review of the scientific literature on the mechanical and biological reactions of craniofacial structures to applied orthodontic and orthopedic forces. Also taught is the design of orthodontic appliances and treatment strategy based on these concepts. This course is built upon the material in the Biomechanics course (8404) where the reactions created by orthodontic and orthopedic forces are presented. Students will learn these at the level of a specialist. The course sessions are conducted as lectures and seminars where students, who have previously read and independently studied the assigned reading materials, will discuss, provide summary statements, critical analysis, and answers to questions in roundtable discussions led by attending faculty members serving as seminar leaders. Additionally, students will make formal presentations based on an assigned independent study related to orthodontics, its mechanics, and practice. Course prerequisites: enrollment in Year I of the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8417. Introduction to Basic Principles of Orthodontics (Lab). 2 Credit Hours.**

Introduction to basic principles of orthodontics lab such as introduction to brackets and wires, appliance placement procedures, impression and study model preparation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8418. Introduction to Basic Principles of Orthodontics (Seminar). 3 Credit Hours.**

Introduction to basic principles of orthodontics such as department forms and procedures (clinical exam and techniques), basic definitions, clinical photography, AxiUm training, including billing, Dolphin Imaging.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8419. Orthodontic Principles and Techniques. 1 to 4 Credit Hour.**

Lecture seminar sequence dealing with the interpretation and application of orthodontic principles of the ethics and concepts. Pertinent literature, research findings, and current orthodontic theory are analyzed in depth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8420. Orthognathic Surgery Seminar. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8421. 3-D Imaging and Computer Generated Orthodontics. 2 Credit Hours.**

Provides orthodontic residents with an introductory overview of various computer generated 3-D ortho appliances to include but not limited to: invisalign, suresmile, surgical treatment planning and indirect bonding.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8422. Advanced Orthodontic Principles and Techniques. 1 to 6 Credit Hour.**

Advanced lecture seminar sequence dealing with interpretation and application of orthodontic principles of the ethics and concepts. Pertinent literature, research findings, and current orthodontic theory are analyzed in depth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8423. Progress Conference and Case Review. 1 to 6 Credit Hour.**

Advanced lecture seminar sequence dealing with interpretation and application of orthodontic principles of the ethics and concepts. Pertinent literature, research findings, and current orthodontic theory are analyzed in depth. Progress of orthodontic cases reviewed and answers to questions in roundtable discussions led by attending faculty members serving as seminar leaders. Everyone attending will have his/her own treatment philosophy. The student is expected to utilize the information gained in this course for clinical activities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8424. Biology of Tooth Movement. 2 Credit Hours.**

This course will cover the histologic, cellular and molecular basis for orthodontic tooth movement, root resorption, and dentofacial orthopedics using historic and current findings in general bone biology, orthopedics and orthodontics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8425. Classic Literature Review. 1 to 6 Credit Hour.**

In this course residents are assigned articles to review from orthodontic journals from the recommended reading list from the American Board of Orthodontics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8426. Multidisciplinary and Adult Orthodontics. 2 Credit Hours.**

This course reviews the combined orthodontic, periodontic, restorative and psycho social need of the adult patient for comprehensive care.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8427. American Board of Orthodontics Preparation Course. 1 to 6 Credit Hour.**

Review selected topics in preparation for the ABO written exam. This includes review of biology of tooth movement, head and neck anatomy, biomechanics, etc.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8428. ABO Mock Boards. 1 Credit Hour.**

This course provides the resident with a comprehensive way to evaluate the outcomes of their diagnosis, treatment plan and actual treatment of 6 patients they completed. This also prepares them for the clinical portion of the ABO clinical exam.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8429. Clinical Biomechanics. 1 Credit Hour.**

This course reviews the basic principles of biomechanics and their use in actual clinical situations. Different appliances and materials are discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8430. Advance Orthodontic Principles and Techniques. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8431. Thesis; Scientific Writing and Preparation Course 1. 1 to 6 Credit Hour.**

In this course essentials of scientific writing are taught. Topics such as organization of thesis, or writing of scientific articles, and the nature of different sections are covered. Emphasis is given to presentation techniques of the written material, avoidance of jargon, proper grammar, and the like, concepts. The student gains experience in reviewing manuscripts submitted to the journal. It includes discussions of essential literature on the nature of science and its reporting. The course sessions are conducted as lectures and seminars where students, who have previously read and independently studied the assigned reading materials, will discuss and provide summary statements, critical analysis, and answers to questions in roundtable discussions led by attending faculty members serving as seminar leaders. Course prerequisites: enrollment in year 1 of the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 8487. Critical Elements in Clinical Orthodontics. 1 Credit Hour.**

This course discusses the fine points of clinical decision making process. Also taught is the ethics of orthodontic specialty and most current innovations in clinical orthodontics. Students will learn the fine points of orthodontic treatment practice through formal case presentations and discussions. Ethics of orthodontic practice are taught with the aid of educational material produced by the American Association of Orthodontists. Course prerequisites: enrollment in Year 2 of the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8510. Interdisciplinary Orthodontic Treatment Seminar. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8513. Operations Management for Orthodontic Practice II. 2 Credit Hours.**

This course is designed to introduce the student to various ways to start practicing. Intellectual property laws, cost of money, building of a new office, buying of existing practice or the process of hiring, marketing, and the like topics are covered. The course sessions are conducted as lectures and seminars where students, who have previously read and independently studied the assigned reading materials, will discuss, provide summary statements, critical analysis, and answers to questions in roundtable discussions led by attending faculty members serving as seminar leaders. Course prerequisites: enrollment in Year 2 of the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 8515. Growth and Development II. 2 Credit Hours.**

The growth and development of the craniofacial complex is a seminar and independent study course that reviews the evidence-based information at the anatomical and molecular level. Genetic and epigenetic influences are taught at the level of specialist. The course sessions are conducted as lectures and seminars where students, who have previously read and independently studied the assigned reading materials, will discuss, provide summary statements, critical analysis, and answers to questions in roundtable discussions led by attending faculty members serving as seminar leaders. Clinical implications of developmental phenomena are discussed in depth. Course prerequisites: enrollment in Year I of the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORTG 9487. Dento-Facial Anomalies Conference. 1 Credit Hour.**

The student is exposed to grand rounds presentations that are conducted jointly by the Kornberg orthodontics and Jefferson surgeons. Students will actively participate to present or discuss the jointly treated cases. In addition, students will make presentations on the topics that are assigned. The focus of the course is management of patients between the two specialties. This is course also includes rotations through the operating rooms at Jefferson University. Additionally, the student will participate in a TMJ dissection course at Jefferson. Course prerequisites: enrollment in the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 9489. Extracurricular Education. 2 Credit Hours.**

This activity requires attendance to approved regional or national meetings and conferences. The principal purpose of this course is to expose the student, in an unbiased format, to novel arguments, instruments, equipment, and services in the orthodontic industry. Students will be assigned selected topics to investigate at the meetings they attend. Upon their return, the graduate students will prepare a talk with the aid of PowerPoint presentations to highlight the pertinent areas of the meeting and their interpretation of the knowledge introduced at the meeting. The quality, appropriateness, and pertinence of these presentations will be judged. Course prerequisites: enrollment in Year 1 of the graduate orthodontics specialty program or with special permission of the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 9587. Graduate Orthodontic Clinic. 1 to 12 Credit Hour.**

This course is treatment of patients in the clinic. The student is expected to demonstrate graduate level mastery of orthodontic diagnosis; treatment skills and management of patients. As the student enters the program s/he is assigned a group of patients. From that pool the student will start a specified number of patients. The number of starts may vary from year to year. But the patient load in terms of numbers and complexity must be distributed as evenly as possible, or as specified, among the attendings. The student will experience a plethora of proven-performer appliances and techniques. Course prerequisites: enrollment in the graduate orthodontic specialty program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 9588. Graduate Orthodontic Screening Clinic. 1 to 12 Credit Hour.**

In this course the student is exposed to teaching and mentoring activities. Teaching and mentoring activities take place in the predoctoral and postdoctoral facilities. The graduate program is heavily dependent on the big brother/sister system. In the predoctoral clinic the resident will serve as the instructor. In the graduate program, the student will mentor the little brother/sister for diagnosis, treatment planning, paperwork, patient management, and the like.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 9589. Tweed Course. 2 Credit Hours.**

The student will attend the Tweed Foundation Course in Tucson, AZ for a two-week period. This course is designed to teach the basics of wire bending and to introduce the student to basics of Tweed diagnostic and treatment philosophy. The course consists of typodont work and lectures. The cost of the course will be borne by the student. US citizens may be qualified for a loan from the Foundation to cover the tuition and travel-related expenses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 9991. Orthodontic Thesis Studies. 1 Credit Hour.**

Mentor-directed activities on preparation of orthodontic research protocols and thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORTG 9996. Orthodontic Thesis Research. 4 Credit Hours.**

Mentor-directed conduct of a basic science and/or clinical research project in orthodontics. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Graduate Periodontics (PERG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PERG 8300. Periodontal Case Presentations. 2 Credit Hours.**

This course focuses on presentations of documented clinical periodontal patient cases for analysis and critical discussion of diagnosis, treatment and outcomes. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 8301. Introduction to Postgraduate Periodontology. 2 Credit Hours.**

An orientation course including overview of clinical periodontology, periodontal anatomy and pathogenesis, clinical methods, photography and record keeping.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PERG 8302. Biology and Pathology of the Periodontium. 2 Credit Hours.**

Seminars reviewing the scientific literature on development, morphology, and physiology of periodontal tissues; histopathology of periodontal diseases; and current concepts on mechanisms of periodontal tissue destruction and repair. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PERG 8305. Combined Spec Treat Plan. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PERG 8306. Introduction to Oral Implantology. 1 Credit Hour.**

Biologic basis for dental implants, including implant biomaterials and bioengineering, biology of bone healing, osseointegration, prosthetic and surgical considerations, implant maintenance, and etiology and management of implant complications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PERG 8307. Advanced Periodontal Microbiology and Immunology. 1 Credit Hour.**

Basic biology, methods of identification, pathogenic mechanisms, host inflammatory and immunological responses, and therapeutic implications of bacteria, yeasts, and viruses implicated as putative pathogens in human periodontal diseases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PERG 8308. Treat/Plan Dental Implan. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PERG 8309. Clinical Oral Implantology. 2 Credit Hours.**

This course focuses on clinical training to competency in treatment planning, surgical placement, and maintenance of endosseous dental implants. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**PERG 8310. Classic Periodontal Literature Review. 2 Credit Hours.**

Critical review of selected classical basic science and clinical research papers pertinent to periodontology. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 8311. Advanced Oral Implantology. 1 Credit Hour.**

Advanced Oral Implantology is a 1-credit course which includes 14 hours of didactic classes. The course builds upon knowledge obtained in the Introduction to Oral Implantology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in PERG 8306.

**PERG 8313. Conscious Sedation. 2 Credit Hours.**

Didactic and clinical training to provide training for the resident in the methods of pain and anxiety control to achieve in-depth knowledge in all areas of conscious sedation, and proficiency in more than one method of conscious sedation. These methods include nitrous oxide/oxygen inhalation sedation, oral sedation or intravenous sedation. Course instruction will include a review of human physiology, physical evaluation, treatment of the medically compromised patient and management of medical emergencies. Residents must complete ACLS and provide documentation as part of this course. Upon completion the resident may qualify for conscious sedation permit in Pennsylvania.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**PERG 8314. Hospital Dentistry. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PERG 8320. Current Periodontal Literature Review. 1 Credit Hour.**

Critical review of selected recent basic science and clinical research review papers pertinent to periodontology. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 8330. Special Topics in Perio. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 8340. Oral Implantology Literature Review. 2 Credit Hours.**

Study and critical review of basic science and clinical scientific literature on dental implants. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 8350. Interdisciplinary Comprehensive Dental Treatment Planning Grand Rounds. 2 Credit Hours.**

Interdisciplinary treatment planning conference exploring complex patient cases. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 9385. Clinical Periodontal Practice. 1 to 12 Credit Hour.**

Clinical experience and documentation in diagnosis, treatment and prevention of periodontal diseases, and periodontal maintenance care. May be repeated for credit.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Periodontics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 9387. Practice Teaching Periodontology. 2 Credit Hours.**

In this course, students gain experience in clinical instruction and patient care supervision in the predoctoral periodontology education program. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**PERG 9487. Oral Pathology Laboratory Rotation. 2 Credit Hours.**

Participation and experience in microscopic examination and diagnosis of human oral tissues at the oral and maxillofacial pathology laboratory biopsy service at Temple University Hospital.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PERG 9991. Directed Research in Periodontology. 4 Credit Hours.**

Development and conduct of a basic science or clinical research project or literature review pertinent to periodontology under faculty mentorship. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Graphic Arts and Design (GAD)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**GAD 5000. Graduate Design: Special Topics. 3 Credit Hours.**

Graduate Level course focuses on topics in design not covered in the regular course offerings. Topics may include, but are not limited to, Environmental Design and Signage, Type Design, Promotion Design, etc. Classroom instruction and assignments will include projects appropriate to the specific topic being offered. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5001. Graduate Design: Design Workshop. 3 Credit Hours.**

Students work on projects for the Tyler Design Incubator. This includes project development and management, research on topics specific to entrepreneurial design practice, and assigned tasks for Incubator activities and events. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5002. Graduate Design: Hybrid Design. 3 Credit Hours.**

Students work on large assignments that have components in both print and interactive media. Instruction in the advanced use of software applications for print and/or interactive media is a significant part of the course. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5003. Graduate Design: Art Direction. 3 Credit Hours.**

This course focuses on concept development with an emphasis on image making and image editing in a variety of forms including book publishing, advertising and signage. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5004. Graduate Design: Packaging. 3 Credit Hours.**

This course focuses on package design for a variety of products. Students work with concept, surface design, typography, materials and the physical construction of three-dimensional forms. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5005. Graduate Design: Publishing. 3 Credit Hours.**

Students work on large-scale publications with a strong emphasis on the development of typographic formats and the inventive use of illustration and/or photographic imagery to create periodicals and/or books that are functional, conceptually sophisticated and visually distinctive. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5006. Graduate Design: Corporate. 3 Credit Hours.**

In this course students develop two large scale identities that include logo design, stationery and collateral materials in a variety of forms that can include booklets, brochures, posters, advertising, signage and/or packaging. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5007. Graduate Design: Interactive. 3 Credit Hours.**

The focus of this course is interactive design for a large-scale website. This project will involve in-depth exploration of interface design, navigation, audio, digital animation and organization of information. Includes instruction in intermediate through advanced programming skills and the use of video composition. A strong grasp of the fundamentals of interactive design is required. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5008. Graduate Design: Authorship. 3 Credit Hours.**

This course encourages students to express perceptions and positions on current issues and events through large-scale projects. Parameters of assignments are generated by individual approaches, challenging each student to engage in decision making to develop unique content and form. The work from this class expands the boundaries of the design discipline beyond traditional client-based practice. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5010. Graduate Design: Special Topics. 3 Credit Hours.**

Graduate Level course focuses on topics in design not covered in the regular course offerings. Topics may include, but are not limited to, Environmental Design and Signage, Type Design, Promotion Design, etc. Classroom instruction and assignments will include projects appropriate to the specific topic being offered. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5011. Graduate Design: Design for the Public Good. 3 Credit Hours.**

Students work on a wide variety of projects for arts and educational groups, social welfare and environmental organizations, and other clients in the nonprofit sector. Projects done in the class will actually be produced — either in print or, in the case of web sites, posted online. Students will be responsible for production preparation and supervision for course projects which could include identities, brochures, posters, invitations, and advertising campaigns. Graduate students in this course will also be expected to lead presentations to the clients and disseminate client feedback to the undergraduates. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5012. Graduate Design: Typography. 3 Credit Hours.**

This course will focus on typography as a medium for both verbal and visual communication. The class will explore basic principles of typography, working with type from its most elementary form - the letter - to complex typography involving words and images in multiple pages - micro to macro. Among the topics we'll be exploring will be the structure of letterforms, letter spacing and word spacing. We'll also look at contrast, texture, legibility, and typographic hierarchies. We'll also discuss the development of typographic concepts, and typographic history. You'll be encouraged to use typographic forms as both abstract and expressive components of visual communication. The class will consist of a combination of critiques, in-class assignments, workdays, lectures, and exercises. You'll also have quizzes and a type test based on a required text and lectures. It's a lot to cover, but by the end of this semester, you'll be well on your way to a much deeper appreciation for typography, and its importance to us in the practice of graphic design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may not be repeated for additional credits.

**GAD 5013. Advanced Typography. 3 Credit Hours.**

Graduate Level course focuses on advanced applications of typography in design. Projects include logo design, book covers, posters, brochures and/or catalogues. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5015. Advanced Typography. 3 Credit Hours.**

Graduate Level course focuses on advanced applications of typography in design. Projects include logo design, book covers, posters, brochures and/or catalogues. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5023. Interactive Design. 3 Credit Hours.**

This course focuses on design for web and motion graphics. A good working knowledge of Adobe Photoshop and Illustrator (Mac Platform) is necessary. Flash and After Effects will be explored from basic to intermediate levels. While staying current with the latest technologies, the emphasis will be on design for communication through interactive media. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5025. Interactive Design. 3 Credit Hours.**

Graduate Level course focuses on design for web and motion graphics. A good working knowledge of Adobe Photoshop and Illustrator (Mac Platform) is necessary. Flash and After Effects will be explored from basic to intermediate levels. While staying current with the latest technologies, the emphasis will be on design for communication through interactive media. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5027. Digital Narratives. 3 Credit Hours.**

Graduate Level course focuses on the creation of a short digital animation/movie based on a supplied narrative. Strong conceptual and technical skills as well as a solid grasp of typography will be necessary for this course. Students will learn one vector based and one video based application to create this design. This course is not cell based animation. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5029. Programming and Production for Web Sites. 3 Credit Hours.**

Graduate Level course focuses on the technical production and programming aspects of producing a fully functioning web site. Topics covered will be the best-practices use of Dreamweaver for site production with an emphasis on CSS, HTML and Javascript programming languages. Students will also be introduced to the fundamentals of the ActionScript language. Students will cover the process of creating a web site and its many considerations such as flowcharts, sitemaps, and wireframes. Students will be introduced to fundamentals of information architecture and search engine optimization (SEO) for use within their site and discuss best-practices for uploading and maintaining their final site. Graduate students will need to keep a portfolio of work that is annotated, summarizing their learning and how they expect it to be applied in future courses. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5053. Art Careers Promotion. 3 Credit Hours.**

Graduate Level Course offers instruction in the design and content of materials needed by fine artist in professional practice. This course will cover a number of topics including resume content and design, stationery packages for business communication (cover letters, professional inquiries, etc.), presentation formats for print and web. NOTE: Open to all studio majors to include: GAD, Art, and Art Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**GAD 5073. Introduction to Web Design. 3 Credit Hours.**

Graduate Level course instructs students in the fundamentals of interactive design with a focus on the use of interactive software, layout, typography, hierarchy and organization. Basic working knowledge of Adobe Photoshop and Illustrator required (MAC platform). Students will be tested for basic competency in these programs on the first day of class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GAD 5078. The Art of Infographics. 3 Credit Hours.**

This course is an introduction to data visualization and infographic design. It explores the history of data visualization and infographic design, from cave paintings to contemporary design, covering static, animated and interactive solutions. Lectures on visual literacy and graphic design foundations will help the students develop the vocabulary necessary to critically analyze contemporary infographics. Students receive basic instruction in the creation of infographics and develop their own infographic utilizing supplied data. This course will include readings from Edward Tufte's "The Visual Display of Quantitative Information" and other texts. Tutorials in Excel and Illustrator may also be used for outside software instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**GAD 5096. Graduate Design: Business of Design. 3 Credit Hours.**

The focus of this course is to understand professional business practices within the design industry. This course will cover a number of topics, including: business models, business writing, presentation, and communications, design thinking, strategy, pricing, contracts, client/project management, etc.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may not be repeated for additional credits.

**GAD 5097. Graduate Design: Graphic Design Theory. 3 Credit Hours.**

This course will introduce students to contemporary design theories and discourse. It will examine the theoretical aspects of artifacts through their making, reading and dissemination. Graphic design and visual communication theories will be compared to those in literature and architecture. Students will use discussion, writing, presentations and design to investigate contemporary design issues. Emphasis will be placed on forming and articulating an individual point-of-view (POV) in discussion and writing. Based on the semester-long discussion about how we visually communicate, all students will draw a revised diagram of the Communication Model developed by Meredith Davis in 2012. Graduate students will also write a 1000-word reflection on the factors that have influenced this eight-year evolution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**GAD 5111. Graduate Design: Illustration. 3 Credit Hours.**

Assignments focus on image-making for communication. Strong concepts, the development of a personal visual approach or style and professional process will be the focus of this course. Graduate students will need to research and present a topic related to contemporary illustration in class to the undergraduates. NOTE: This course is open to Graphic and Interactive Design MFA students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 5182. Independent Study. 1 to 3 Credit Hour.**

Graduate Level course where the proposal for a large-scale independent project must be approved by a faculty member who agrees to oversee the project prior to registration for the course. The proposal must relate to authorship and/or entrepreneurship and have the breadth and depth of a semester long graduate project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8001. Visual Design Graduate Seminar. 3 Credit Hours.**

Graduate projects in graphic design authorship. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8002. Visual Design Graduate Seminar II. 3 Credit Hours.**

Graduate projects in graphic design authorship. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8083. Graphic Design Graduate Projects. 3 Credit Hours.**

Graduate projects in graphic design authorship. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8084. Graphic Design Graduate Projects II. 3 Credit Hours.**

Graduate projects in graphic design authorship. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8095. Visual Design Thesis. 3 Credit Hours.**

Thesis project representing comprehensive original research in an area of specific interest for the degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8096. Visual Design Thesis II. 3 Credit Hours.**

Thesis project representing comprehensive original research in an area of specific interest for the degree candidate. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8111. Graduate Seminar in Printmaking. 3 Credit Hours.**

Philosophy and theory of contemporary printmaking practices. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8112. Graduate Seminar in Printmaking II. 3 Credit Hours.**

Philosophy and theory of contemporary printmaking practices. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8183. Graduate Projects in Printmaking. 3 to 12 Credit Hours.**

Individual conferences and group seminars. Emphasis on diversity of command in several printmaking media. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8184. Graduate Projects in Printmaking II. 3 to 12 Credit Hours.**

Individual conferences and group seminars. Emphasis on diversity of command in several printmaking media. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8189. Collaborative Design Workshop in Rome. 3 Credit Hours.**

The six week course is geared toward design students interested in immersing themselves in the culture of Italy and producing, by the end of the workshop, a printed project about design, art, and culture in Rome. Students will have a choice of topics to research, design, and produce. Among the many topics that students could focus on are Roman decorative arts, cuisine, theatre, architecture, fashion, music, and film. Students will also be encouraged to study how the Italian design aesthetic and philosophy might be applied to their own work. An integral part of this project will be both digital and traditional image making. Students will photograph and/or illustrate an article that will be incorporated into the final collaboratively produced printed piece. Note: Open to majors in the following disciplines - Graphic and Interactive Design, Photography, Illustration, Fashion Design, Interior Design, Industrial Design, Landscape Architecture, Architecture, Journalism, Advertising.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8201. Digital Projects. 3 Credit Hours.**

The emphasis of this course will be on creating a professional digital portfolio. Throughout the semester, students will learn a series of multimedia software applications and develop interactive presentations that will promote themselves as artists with contemporary and professional portfolios. Note: The course is limited to seniors and graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8211. Graduate Seminar in Photography. 3 Credit Hours.**

A seminar emphasizing individual research and group discussion of contemporary issues in photography. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8212. Graduate Seminar in Photography II. 3 Credit Hours.**

A seminar emphasizing individual research and group discussion of contemporary issues in photography. Note: This course can only be taken twice for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8222. Contemporary Photography. 3 Credit Hours.**

We live in an extraordinary moment in the history of photography, a moment much hoped for and anticipated by many champions of the medium. Finally one can say without qualification that photography is a medium fully embraced by the contemporary art world. While there has always been a movement to look at and discuss photography as art, photography has never played a more central, critical and vital role in contemporary art than it does now. This course will look at both the role that photography plays in contemporary art and the role that contemporary art plays in photography. By surveying contemporary trends in photography, students in this class will develop an understanding of what exactly photography is now. At the same time the class will attempt to answer questions about what it means to be contemporary, about what the relationship between the contemporary and the historical is, and why this might be important. Through these problems students will be encouraged to develop personal work that addresses themes and ideas discussed in the class. Note: Open to Junior/Seniors. Special authorization required for non-majors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8253. Graduate Photo Process Workshop. 3 Credit Hours.**

Survey of experimental techniques, including hand applied, light-sensitive emulsions, ortho film making, photographic book arts, and 19th- and 20th-century processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8255. Graduate Photo Workshop: Digital Photography. 3 Credit Hours.**

State of the art technology merges with new issues related to digital imaging.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8256. Graduate Advanced Photo Workshop. 3 Credit Hours.**

Photography and new applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8283. Graduate Projects in Photography I. 1 to 12 Credit Hour.**

Individual conferences and group seminars. Emphasis on mastery of conceptual and technical practices with lens-based media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 8284. Graduate Projects in Photography II. 1 to 12 Credit Hour.**

Individual conferences and group seminars. Emphasis on mastery of conceptual and technical practices with lens-based media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.



**GAD 8413. Photographic Lighting. 3 Credit Hours.**

At the core of any commercial or fine art photographer's practice is an in-depth understanding of lighting. Light is the fundamental element that makes a photograph possible, and every successful photographer's control over light is the key to their success. This course will not only focus on allowing you to gain a thorough understanding of artificial lighting techniques, but also how to approach natural light situations better, and beyond that, to an understanding of how the two work in conjunction. By revisiting the fundamentals of the large format view camera, and developing an understanding of environmental and situational lighting techniques, you will learn different commercial and fine art approaches to working in a studio setting. You will also learn lighting techniques with digital and medium formats, as well as develop an understanding regarding the differences between digital capture and negative film. In addition this course will cover advanced exposure control, lighting on location, and product lighting. Note: This course is repeatable for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**GAD 9189. Design Workshop in Japan. 3 Credit Hours.**

The six week course is geared toward graphic design students interested in immersing themselves in the culture of Japan and producing a design project about this experience. Students will have a choice of projects to design and produce. They will be encouraged to study how Japanese design aesthetic and philosophies might be applied to their own work. Note: A basic knowledge of design industry-standard print software is required for this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

## Health Information Management (HIM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HIM 5101. Fundamentals of Health Informatics. 3 Credit Hours.**

This course provides an introduction to the history, reasoning, and development of systems focused on the generation, aggregation, and analysis of health data. Students will gain exposure to usability requirements - elements of design which impact selection - in addition to the issues impacting data liquidity in the healthcare system. The course will also consider the various types of health information systems that exist in organizations and serve as feeders to clinical repositories of information.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5102. Applications of Computer Programming in Health Informatics. 3 Credit Hours.**

It is critical to teach health professionals how to apply computer programming and health informatics for successful health data analysis and application development. This course will introduce the characteristics of health data and provide basic and advanced applications of computer programming, especially Python and R, specifically focused on healthcare data analytics and application developments. By the end of this semester, students will be able to perform health data manipulation using Python and R, building predictive models, discover trends, visualize and present the analytical results, and design machine learning approaches in healthcare big data in medicine, and solve associated data mining challenges on dealing with such complex heterogeneous data. This course is devised in two parts, 1) Introducing the corresponding programming functions and 2) Practical applications to real life health applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5106. Technology for Population Health. 3 Credit Hours.**

Individuals and organizations are increasingly dependent on technology for the creation of information relevant to health status. Technology is being utilized to monitor health or social behavior or provide interventions in the form of information, alerts, or the provision of information to advanced health practitioners. This course is intended to provide students an opportunity to assess existing and emerging technologies as they relate to the delivery of healthcare or the maintenance of health status.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5111. Technology for Healthcare Financial Management. 3 Credit Hours.**

This course examines the nexus of value based care, financial management, and healthcare payment. Students examine complex financial systems and explore the principles of payment as they apply to various types of health care settings. This course focuses on payment policy and reporting requirements, and the students become familiar with topics such as fraud and abuse, revenue cycle management, integration of clinical and financial systems, charge master data, and managerial implications of alternative payment models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5112. Health Information Systems: Design and Decision Making. 3 Credit Hours.**

This course provides an introduction to the effective management of health informatics systems. Students will gain an understanding of the technical foundations required for the successful management of health informatics systems and the impact of adopting initiatives relative to an organization's operational and strategic goals. Students gain an exposure to industry benchmarking and appropriately valuing technology in healthcare. Topics related to the use of IT as a strategic resource, forming strategic health IT plans, the importance of stakeholders in health IT programs, and emerging healthcare technologies are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5113. Database Administration for Health Informatics Professionals. 3 Credit Hours.**

Modern life science organizations rely on databases for transaction management, data analysis, outcomes assessment, and to satisfy the internal needs of the organization as well as to satisfy regulatory, legal, and accrediting bodies. The goal of the course is to provide hands-on use of database management tools promoting a strong understanding of database design, data modeling and structured query language for data definition and data manipulation, and data analysis tools including pivot tables. In addition, the course will explore operational database systems versus analytic systems, the importance of database design on data integrity, data warehousing, and data mining at modern health science organizations. Data formats, collection, and integrity as they relate to continual performance improvement, with specific attention to practitioner performance, are also stressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5114. Health Informatics Project Management. 3 Credit Hours.**

The development of interoperable electronic health record systems has resulted in increased systems integration, convergence, and complexity. Nearly half of all IT projects fail to meet budget, schedule, and functionality. The course provides a hands-on approach to systems analysis and management of health informatics (HI) projects. Students will be introduced to the concepts of managing HI projects by focusing on initiating, planning, executing, controlling, and closing projects in the context of topics such as integration, scope, timing, cost, quality, human resource, technology, communications, and risk and procurement. Students will also be provided an opportunity to analyze functional requirements for HI projects using a variety of process modeling approaches.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5127. Privacy and Security: Protecting Healthcare Data. 3 Credit Hours.**

This course focuses on privacy and confidentiality and current legislative and health policy issues for electronic health record systems (EHRs). Ethical issues related to EHRs and advocacy of patients' and consumers' needs are explored. The course provides students with an understanding of regulatory requirements related to the protection of health information and introduces technical approaches to ensure compliance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5128. Health Data: Standards and Interoperability. 3 Credit Hours.**

This course provides an introduction to the principles of healthcare interoperability and provides foundation in healthcare standardization related to: privacy, security, clinical vocabularies, data messaging, architectural framework, data content, and the meaningful use of electronic health record systems (EHRs). The course explores the role of healthcare standards in supporting interoperability, patient care, research, and the practice of evidence-based medicine. National and international standards development efforts are also discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIM 5129. Health Data Analysis. 3 Credit Hours.**

Healthcare delivery systems require capabilities to effectively generate, aggregate, and analyze data relevant to the optimal delivery of healthcare and maintenance of health. This course is intended to build on the competencies gained in previous courses surrounding the creation, structure and maintenance of clinical datasets, patient generated health data, and elements of the digital medical record. The course is designed to embrace team based approaches to solving complex issues in the healthcare delivery system. Students will use data visualization tools paired with quantitative data driven techniques which aid in addressing the challenges in the Triple Aim in healthcare. This course will enable the student to build a basic working knowledge of data analysis, dash boarding, and clinical intelligence platforms using appropriate methodologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (HIM 8013 or HIM 5113)

**HIM 5190. Special Topics. 3 Credit Hours.**

This course provides students the opportunity to explore new and emerging areas in the field of health informatics, to gain a deeper understanding of a specific area within the field. This course may also be used to present areas of study not normally taught in the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIM 5212. Application Development in Public Health. 3 Credit Hours.**

This course provides an in-depth understanding of the design and decision making processes for health informatics systems. Students will gain an understanding of the technical foundations required for the successful management of health informatics systems and the impact of adopting initiatives relative to an organization's operational and strategic goals. Students gain an exposure to industry benchmarking and appropriately valuing technology in healthcare along with current software development life cycle methodologies. Topics related to the use of IT as a strategic resource, forming strategic health IT plans, the importance of stakeholders in health IT programs, collection and documenting user stories, developing design documents, and building solutions and emerging healthcare technologies are explored. Students will collaborate in teams to complete a pragmatic, real world project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5101 and HIM 5102.

**HIM 5213. Informatics Solution Design and Development for Health Data and Its Applications. 3 Credit Hours.**

This course provides an in-depth understanding of the processes and tools used in health informatics for designing and developing advanced health informatics data solutions. This course prepares students to design and develop health specific solutions and applications using current health data models including star schemas, the Observational Health Data Sciences and Informatics (OHDSI), and the Observational Medical Outcomes Partnership (OMOP) common data models (CDM), with clinical, administrative, and social determinants of health data. Relational databases, graph databases, GIS systems, and other NoSQL databases will be used for development from Health Informatics use cases. Students are expected to be able to create health specific informatics solutions and applications, such as those used for clinical data research networks and patient cohort discovery tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5101 and (HIM 5113 or CIS 5002)

**HIM 5256. Global Health Informatics. 3 Credit Hours.**

Health and diseases have no country boundaries. Increased international travel has increased the spread of infectious disease, as evidenced by the Ebola virus and COVID-19 pandemics. Health Information Technology, particularly with the spread of mobile phones, brings new paradigms in tracking and battling diseases globally. This course will explore how global health informatics (GHI) combat diseases and promote health, especially in low- and middle-income countries (LMICs). The topics cover key concepts, frameworks, examples, and lessons learned in designing and implementing digital health systems in the developing world. Students will learn informatics innovations in global health, focusing on technologies to improve developing countries' health outcomes. It targets students interested in designing or implementing a GHI solution in LMICs with a multidisciplinary team.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5101.

**HIM 5299. Introduction to Language Processing and Text Mining for Health Professionals. 3 Credit Hours.**

This course provides a basic understanding of natural language processing (NLP) concepts in healthcare using Python programming language. This course is designed for students with a health background who do not have a basic knowledge of the NLP concepts. There is a vast amount of free-text data getting generated every day, such as social media, online chat groups, research publications, and electronic health record data. This data possesses excellent potential to be used for research, quality improvement, and financial purposes. In this class, students will learn the basic and advanced NLP and text-mining methods to extract information from free-text data to generate new knowledge. Students will also learn basic machine learning principles to mine free-text data that does not require to develop complex NLP pipelines. By the end of this course, students will be able to create NLP programs using concepts such as data segmentation, tokenization, text annotations, NLP parsing, part of speech tagging, developing and testing Named Entity Recognition (NER) programs, pattern recognition, and regular expressions. Students will also learn the use of WEKA, an open-source machine learning tool to mine free-text data to extract information automatically using various machine learning models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5102.

**HIM 8016. Principles and Practices of Health Informatics Research. 3 Credit Hours.**

As the healthcare system moves toward increased reliance on automation, electronic health records, and information technology, it is imperative to design health informatics research methods to deliver quality, cost-effective and safe healthcare. This course will address the various research practices and innovative research approaches in health informatics and HIM. It will introduce the theories, systems, applications, and technologies for collecting, using and disseminating health data and information. It involves utilizing primary and secondary analysis for direct patient care, reimbursement, patient safety, legal issues, healthcare policy, quality improvement, and public health. Students will learn through discipline-specific examples, step-by-step research design, and explanations of analytical procedures. Upon completing the class, students will be able to conduct quality health informatics research in addressing various informatics-related questions and knowledge discovery from health data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5129.

**HIM 8112. Advanced Clinical Decision Support Systems. 3 Credit Hours.**

Clinical decision support systems (CDSS) are computer-based programs that analyze data within electronic health records (EHRs) to provide prompts and reminders to assist health care providers in implementing evidence-based clinical guidelines at the point of care. This course provides a state-of-the-science overview of computer-based CDSS. This course will teach the design principles behind CDSS, CDSS usability and cognitive support, implementation science, mathematical foundations of the knowledge-based systems and pattern recognition systems, clinical vocabularies, legal and ethical issues, patient centered CDSS, and applications of clinical decision support systems in clinical practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5102.

**HIM 8129. Advanced Health Data Analytics. 3 Credit Hours.**

Healthcare delivery systems require capabilities to effectively generate, aggregate, and analyze data relevant to the optimal delivery of healthcare and maintenance of health. This course is intended to enhance existing competencies for the creation, structure and maintenance of clinical datasets, patient generated health data, and elements of the digital medical record. The course is designed to embrace team science approaches to solving complex issues in the healthcare delivery system. Students will use data visualization tools paired with advanced quantitative data driven techniques which aid in addressing the challenges in the Triple Aim in healthcare. This course will enable the student to build a research based working knowledge of data analysis, dashboarding, and clinical intelligence platforms using appropriate methodologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5101 and HIM 5102.

**HIM 8216. Applications of Machine Learning for Health Informatics. 3 Credit Hours.**

The use of machine learning (ML) and artificial intelligence (AI) in healthcare is a must nowadays to enable successful solutions for better patient care. The future of health becomes data-driven. There is an urgent need for a new kind of workforce embracing human intelligence with machine learning skills to solve complex problems from health informatics. This course will integrate problem-based learning (PBL) and research-based teaching (RBT) approaches to apply ML methods and tools for complex real-world health problems. One example is creating intelligent clinical decision support systems for the early diagnosis of neurodegenerative diseases. Students will practice ML on electronic health records (EHR), medical claims, and social media data in healthcare. Upon completing the class, students will be able to identify suitable machine learning approaches and existing tools for a health problem based on the available data variables and records. Note: Students must complete HIM 5102 or equivalent computing experience (with instructor approval) before registering for HIM 8216.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HIM 5102.

**HIM 9082. Independent Study in Health Informatics. 1 to 3 Credit Hour.**

This course provides students the opportunity to work independently under the direction of a faculty advisor to gain a deeper understanding of an area in Health Informatics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIM 9995. Capstone Project. 3 Credit Hours.**

The capstone course is the culminating class for students in the Health Informatics program. Students will create strategies and approaches that focus on various disciplines of health informatics such as topics relating to the Electronic Health Record, Health Information Exchange, Meaningful Use, and Ethical/Legal issues. In addition, students will analyze systems and evaluate potential decisions from the persona of senior level healthcare executives.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Health Informatics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (HIM 8001 or HIM 5101), (HIM 8013 or HIM 5113), (HIM 8027 (may be taken concurrently) or HIM 5127 (may be taken concurrently)), (HIM 8028 (may be taken concurrently) or HIM 5128 (may be taken concurrently)), and HIM 5006.

**HIM 9996. Health Informatics Thesis. 1 to 3 Credit Hour.**

The MS health informatics thesis is the culminating event for the Thesis Track. The thesis should be an original piece of research. Often, but not always, the research described in the MS thesis can be published in a peer-reviewed journal. The student coordinates the time for the defense and presentation with their Graduate Advisory Committee, which is responsible for evaluating the thesis and its defense.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Health Informatics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in HIM 5101, HIM 5102, HIM 5113, HIM 5129, HIM 5128, HRPR 5001, HIM 8016, and (HIM 5106, HIM 5111, HIM 5112, HIM 5114, HIM 5127, HIM 5212, HIM 5213, HIM 5299, HIM 8112, or HIM 8216)

**HIM 9998. Dissertation Proposal Research for Health Informatics. 1 Credit Hour.**

After passing the preliminary examinations, students may enroll in HIM 9998. Students must be enrolled for 1 credit of HIM 9998 each term until they file their dissertation proposal with the Graduate School. To fulfill the requirements of HIM 9998, students must submit a dissertation proposal, successfully defend it orally before their Committee, apply for IRB approval for the proposed research, and submit the proposal to the Graduate School. Once the proposal is defended, the student is elevated to candidacy and eligible to register for dissertation credits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in HIM 9994.

# Health Policy and Management (HPM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

## **HPM 5005. International Health Studies Abroad. 6 Credit Hours.**

Students learn to articulate a historical and cultural understanding of the Costa Rican approach to health and medical care, to identify the major health concerns of the Costa Rican population in rural and urban settings and the major strides taken to improve health, to conduct limited fieldwork with rural communities in teams of 3 to 4 persons or conduct community health field research among the graduate students, and to write a professional paper and presentation on one of the health issues in Costa Rica based on their experience there. While previous Spanish language proficiency is not required, some Spanish language ability is essential for students to gain the maximum understanding during the program. Therefore, students during the first two weeks of the program take intensive Spanish language training in Costa Rica at the Institute for Central American Development Studies (ICADS). The third week involves travel to other regions within Costa Rica to examine different health conditions depending on the year's topics. During the fourth and fifth weeks, students live and work in rural communities and help to facilitate health education workshops on different activities such as: diabetes, nutrition, HIV/AIDS prevention education, women's health, child health care issues, first aid education, fitness and exercise, and backyard gardening.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## **HPM 5006. Political and Economic Aspects of Health. 3 Credit Hours.**

The course provides an introduction to the structure and delivery of healthcare in the United States, as well as an introduction to health policymaking. In addition to required reading materials, students will be asked to examine current health policies at the local, state, and/or national level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## **HPM 5007. Principles of Emergency Management. 3 Credit Hours.**

This course is designed to introduce students to the concepts and models of public health preparedness and response for all hazards emergency management. It will enable health care and allied health professionals, public health professionals, and emergency responders to work together to plan and respond effectively to both natural and man made disasters. The course will introduce students to the identified core competencies of emergency health preparedness for public health professionals, which include functional roles, communication, resource identification, problem-solving, and evaluation. The issues of mental health and special populations will be introduced in an emergency management context. Students will utilize problem-based learning by analyzing actual disaster events and applying the theories, principles, and practice of preparedness, response, mitigation, and recovery.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## **HPM 5014. Leadership and Management in Non-Profit Organizations. 3 Credit Hours.**

This course covers leadership and management in public health practice. The course will review leadership styles, moving through the "leadership pipeline" to help students understand the basic underpinnings of leadership. Within that context, the course will explore the essentials of applying strong leadership practices in public health organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## **HPM 5016. Public Health Advocacy. 3 Credit Hours.**

The purpose of this course is to prepare future public health practitioners with substantive knowledge on how policy is crafted and how to effectively integrate public health science in the policy process, and to provide practical skills on engaging policymakers and public constituencies to support public health initiatives. It will combine policy/advocacy strategy, real-life case studies, lectures by policymakers, and strategic analysis of recent legislative developments in health care. Reading assignments provide background knowledge for class lectures and discussion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 5107. Forced Migration and Refugee Health. 3 Credit Hours.**

This course uses case studies and research literature to examine the multifaceted causes of complex emergencies and their subsequent impacts on the health of the population, including populations that stay in place, that are internally displaced (IPD), and population movement that crosses international borders (refugees). The policies and practices of the humanitarian response among both governments and non-governmental organizations (NGOs) and their impact on population health will be explored. A framework for three issues that effect population health in complex emergencies will be provided and their consequences and possible interventions iterated. These issues are mental health, gender based violence, and nutrition. Assessment, program implementation, and evaluation will be looked at in the context of the particular barriers and issues found in complex emergency situations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HPM 5111. Community Outreach in Public Health. 3 Credit Hours.**

This course is designed to introduce students to the concepts and models of strategic community outreach as it pertains to the special population communities, within the context of emergency management planning, response, and recovery. It will assist health care and allied health professionals, public health professionals, and emergency responders to understand how accessible information and technology is part of the community outreach strategy. Students will utilize problem-based learning by analyzing actual and scenario-based disaster events and applying the theories, principles, and practices of strategic community outreach pertaining to emergency response and recovery. In addition, students will learn about the issues faced by special population communities and how to address these special needs in all hazard response and recovery.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 5122. Healthcare Quality and Safety. 3 Credit Hours.**

Quality management and quality improvement is the process undertaken by public health professionals, clinical providers, and other management professionals to identify underlying systemic issues in healthcare delivery impacting patient outcomes. Quality improvement and quality management utilizes data to establish performance standards within the healthcare delivery system. The iterative process of quality improvement includes the identification of pertinent issues, the development or sourcing of measurement tools, the ability to monitor adherence to widely accepted industry norms, and the ability to successfully manage change within an organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 5131. Health Policy Analysis. 3 Credit Hours.**

Health policy has a profound impact on population health outcomes. But how do we determine which policies are most likely to have a positive impact on health? Health policy analysis plays a central role in evaluating the impacts of policy on population health. This course introduces students to policy analysis and its role within the policymaking process. Students will learn about various types of policy analysis and methods for conducting policy analysis, with a focus on health policy. Students will conduct literature reviews, draft a problem statement, identify policy solutions, write policy briefs, and conduct a formal health policy analysis. This course is appropriate for students with specific professional interests in conducting health policy analysis, as well as students with more general interests in policy, health, and their relationship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HPM 5006.

**HPM 5132. Comparative Health Systems: Local, National, and Global Perspectives. 3 Credit Hours.**

Healthcare and public health systems around the world take various forms and they perform differently in the task of maintaining individual and population health - and in responding to emerging health issues. This course brings together perspectives from traditional health system analysis and global health research to examine development, organization, and performance of health systems in high-, middle-, and low-income countries. The course will also explore the relationship between national health systems and international global health organizations, such as the World Health Organization, the World Bank, and financing mechanisms like the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Students will develop the ability to produce comprehensive assessments of health systems and assess health system performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HPM 5190. Special Topics. 3 Credit Hours.**

This course provides students the opportunity to explore new and emerging areas in the field of health policy and management, to gain a deeper understanding of a specific area within the field. This course may also be used to present areas of study not normally taught in the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HPM 5202. Man-Made Disasters: Radiological, Chemical and Biological Terrorism. 3 Credit Hours.**

This course is designed to introduce students to the concepts and models of public health preparedness, mitigation, and evaluation in the context of man-made disasters, including radiological, chemical and biological incidents. The course addresses identified core competencies of emergency preparedness for public health professionals that include disaster management, risk assessment, risk communication, governmental resources, functional roles, surveillance, and preparedness evaluation. Man-made disasters are looked at in a historical, environmental, and psychological context in order to elucidate the role of public health in man-made disaster preparedness and evaluation. In addition, the role of cultural competency and the needs of special populations are addressed. Public perception of risk and media views of man-made disasters are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HPM 5208. History of U.S. Public Health. 3 Credit Hours.**

To advance public health in the United States, it is important to understand the history of public health and how public health evolves. This course surveys the history of public health in the U.S. over the past 300 years and issues relevant to the 21st century. Each class session will focus on a history of public health theme, including shifting patterns of disease and illness; the emergence of public health as a profession; and the development of the U.S. public health systems. The class will focus on the dual nature of public health, encompassing both the biological basis of medicine and the economic, political, and cultural characteristics of societies in which public health operates. We will highlight how the beliefs and priorities in U.S. society have influenced both response to public health challenges and the activities by public health professionals to address these challenges. This includes scientific standards; religious or moral beliefs; and the political, cultural, economic, and sociodemographic gender context of society. Understanding historical interrelationships among context, issues, and decisions can help public health professionals better recognize and address today's challenges.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 5500. Seminar in Current Issues in Public Health. 3 Credit Hours.**

Seminar topics rotate to address current issues in public health research, policy and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may be repeated for additional credit.

**HPM 8002. Research Seminar in Public Health. 3 Credit Hours.**

This is a research seminar on linkages between theory and research in social and behavioral health studies. It is required for Ph.D. students prior to taking the preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 8005. Theor Hlth Policy Making. 3 Credit Hours.**

The purpose of this course is to introduce students to the primary theoretical frameworks for the development of policy, from agenda setting through decision-making and implementation. In addition to reviewing the theoretical foundations of policymaking, the course will apply the theories to current health policy issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**HPM 8008. Health Economics. 3 Credit Hours.**

This class will promote the understanding of core health economics theory, using research literature and case studies to examine how economic theory has shaped the development and understanding of the healthcare systems and policies in the U.S. A background in economic theory will help students to understand and interpret research based on those theories. Health Economics is intended to promote an understanding of how these theories fit into the formation and changes in our healthcare structure. It will also offer an economic perspective on health behavior, such as how discounting relates to risk behavior and how risk preference relates to insurance purchase.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 8013. Research Methods in Health Policy. 3 Credit Hours.**

The purpose of this course is to introduce and engage students in research methods used in health policy research, including both the development of policies and the evaluation of existing policies. The course will cover both qualitative methods such as policy analysis, interviewing, focus groups and content analysis, as well as quantitative methods such as legal mapping studies, secondary data analysis, and some economic evaluations. The course will explain and engage these methodologies, but students are not expected to carry out statistical analysis. Lastly, the course will require students to think about the results generated in such research and effective ways in which to communicate such findings to the appropriate audience. The course is intended for students who will be working on policy research or social science research that may include a policy component. Learning objectives will be met through didactic lecture, a formal policy analysis paper, individual homework assignments, and a final exam.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 8014. Comparative Health Policy. 3 Credit Hours.**

Approaches to public health policy are informed and influenced by evidence and experience from across the nation and around the globe. Students will be challenged to think about the social, cultural, political and economic challenges of engaging public health policy to advance population health in an international context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (HPM 5006 or PBHL 5006)

**HPM 8015. Public Health Policy and Legal Issues. 3 Credit Hours.**

This course will introduce public health students to the basic legal principles underlying public health policy and the mechanisms to achieve policy change. The law is a powerful tool to support public health, but government must act within the confines of the Constitution and balance competing rights of individuals and the broader community. The course will explore these relationships in historical and present contexts and examine the differences among federal, state, and local governments' authority to enact public health policy. Students will be able to identify the legal issues that arise when government attempts to regulate risky behavior by individuals or the conduct of companies that produce and market products that create such risks (e.g., tobacco, firearms, and alcohol). The course will evaluate why the law is not uniform depending on the product government seeks to regulate (e.g., food vs. vaccines) and how litigation can effectively change this legal landscape. Any student interested in policy should be familiar with basic legal rules and current debates in regulation and control; this class will provide such insight and equip students to work in any type of policy or advocacy setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (HPM 5006, PBHL 5006, HPM 8003, or PBHL 8003)

**HPM 8112. Public Health Program Evaluation. 3 Credit Hours.**

The course concerns research methods and techniques used to evaluate public health programs. Students develop an evaluation design, including defined evaluation questions, study design, specific measures and methods, and human subjects protocols.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 9083. Readings and Conference in Public Health. 1 to 3 Credit Hour.**

This is an advanced tutorial in public health with an appropriate faculty member. Note: Registration requires a written contract with the supervising faculty member and approval of the student's advisor and of the Director of Graduate Programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HPM 9189. MPH Capstone Seminar. 3 Credit Hours.**

This seminar is required of M.P.H. students during final year of study. The seminar includes integration of coursework and practice skills to develop a fieldwork project or internship in a public health agency.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HPM 9289. MPH Fieldwork I. 3 Credit Hours.**

The MPH is a professional degree designed to prepare you to work in the field of public health or health services. As such the program culminates in an integrative experience that facilitates the application of skills and competencies acquired through the MPH Program through fieldwork. This course entails a fieldwork project or internship in a public health agency or other health services organization. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 5002, EPBI 5005, EPBI 5101, HPM 5006, SBS 5001, and (SBS 5002 or SBS 5102)

**HPM 9389. MPH Fieldwork II. 3 Credit Hours.**

This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HPM 9991. Public Health Research Project. 1 to 3 Credit Hour.**

Under the direction of an appropriate graduate faculty member, students tie together their coursework in a project that poses a problem, gathers data to help analyze the problem, and provides a solution. Note: Enrollment must be approved by the student's advisor and the Director of Graduate Programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HPM 9994. Preliminary Examinations. 1 Credit Hour.**

This course supports preparation for taking the preliminary examinations in the Health Policy and Social and Behavioral Sciences Ph.D. programs. To enroll, students must have completed all required coursework for the Ph.D. and obtain the approval of the Ph.D. Program Director. Students must be enrolled to take the required preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HPM 9995. Public Health Law Research Project. 3 Credit Hours.**

The purpose of the Public Health Law Research Project is to provide a mentored research experience for students who have completed the foundational work in Public Health Law and have demonstrated the analytic abilities in Multivariable Statistics. Students are encouraged to develop their own empirical legal dataset or use an existing legal dataset to conduct an empirical analysis of a current or emerging public health policy. The course involves close research mentorship during the development and implementation of the research project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Pre-requisites:** Minimum grade of B- in JUDO 9189 and EPBI 8012.

**HPM 9996. Masters Res in Pub Hlth. 3 Credit Hours.**

This course is limited to students who have chosen to fulfill the master's degree by writing a thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HPM 9998. Dissertation Proposal Research. 1 Credit Hour.**

This course supports preparation of the dissertation proposal. The course is required for students who have passed the preliminary examinations for their PhD program and who have not yet defended the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in HPM 9994.

**HPM 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is limited to Ph.D. candidates who have completed and defended a dissertation proposal that is filed with the Graduate School by the last day to add a course in the semester. Continuous registration in 9999 fall and spring is required until the dissertation is successfully defended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Health Related Professions (HRPR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HRPR 5001. Current and Emerging Issues in Public Health and Health Professions. 0 Credit Hours.**

This course is designed to provide students with an introduction to the five core areas of public health -- biostatistics, epidemiology, environmental health, health services administration, and social behavioral sciences -- and to demonstrate the intersection of public health with various health, health care, and human service professions. The discipline of public health is multifaceted, and these facets impact individuals and communities in different ways. Students will be expected to think critically about issues such as disease prevention, health promotion, the determinants of health, health information privacy, access to health services, and environmental issues, and to consider how those issues drive human behavior and community (local, national, and international) development. Successful graduation from the College of Public Health is contingent upon completion of 12 web-based modules from the approved compendium for this course. There are six core modules that all students must complete: Advancing Health People 2020, Social Determinants of Health, Access to Health Services, Health Information Technology, Public Health Infrastructure in the United States, and Environmental Health. The remaining six modules may be either embedded by program faculty or self-selected and self-paced by the individual student. Faculty can mandate certain modules within course content.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 5002. Emergency Medical Technician (EMT). 6 Credit Hours.**

The Emergency Medical Technician curriculum follows the National Registry of Emergency Technician standards in a traditional course setting. In a traditional setting, material is taught in a dynamic classroom environment where hands-on skills are heavily integrated. Students will utilize an assigned textbook and associated interactive supplements to complete readings, assignments, presentations, and non-psychomotor skill labs. Students will complete field clinical hours with affiliated prehospital and hospital facilities. Throughout the course, and through application of skills in the clinical setting, students will become proficient in Basic Life Support (BLS) care and initial exploration of Advanced Life Support (ALS).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 5005. Introduction to Mindfulness. 3 Credit Hours.**

This 3-credit course will review the history of mindfulness and then move to modern approaches and applications of mindfulness. A personalized mindfulness practice will be explored for relevance to a student's life and pursuit of clinical excellence in their chosen field. The course will focus on the neuro-biological influence of stress, the gut-brain axis, and the epigenetic nature of the human experience. It will explore issues such as conflict, approach versus withdrawing behaviors, and response to clinical scenarios with a clinical instructor (i.e. giving and accepting feedback). Students will deepen their understanding of concepts such as compassion fatigue, burnout, cognitive empathy, vulnerability, resilience, and chronic sorrow. The course serves as a springboard for future learning and deeper exploration into specific areas of mindfulness application, at a personal or population level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 5200. Clin Pharm. 1.5 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRPR 5999. Research Experience in Health Professions. 0 Credit Hours.**

The Research Experience provides graduate students hands-on experiences in a research setting prior to undertaking independent, director, master's project, master's thesis, or dissertation research. This course allows graduate students the opportunity to learn best practices and principles of health research, including designing and carrying out a study, collecting preliminary data, field experiences, participation in research group meetings, assisting with analyses, drafting manuscripts, etc. with faculty which may lead to identifying a faculty mentor. The course will be graded as Pass or Fail. The Research Experience is a non-repeatable course. After the completion of this Research Experience, students will need to be enrolled in an independent study, directed research, master's research, master's thesis, dissertation proposal, or dissertation if they continue in an active research program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8001. Introduction to Health Outcomes Measurement Science. 3 Credit Hours.**

This course provides an introduction to health outcomes conceptual frameworks and assessment methods. Students will gain exposure to health outcome frameworks from public health, medical, and economic perspectives. This course will provide an overview of health outcome assessment tools. It will consider factors that influence the validity and meaningfulness of outcome assessments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8002. Qualitative Methods in Health Outcomes Measurement. 3 Credit Hours.**

This course focuses on the application of selected qualitative approaches used in the conceptualization and development of health outcome measures, in particular patient reported health outcome measures. This course draws from a variety of disciplines providing a foundation for the philosophical and theoretical bases of qualitative research paradigms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8003. Quantitative Methods in Health Outcomes Measurement Science. 3 Credit Hours.**

This course will cover the classical and modern test theories and their applications to solve measurement problems in practice. This course will educate students on measurement concepts including test standardization, validity, reliability, operational definitions, scaling, and latent variables in behavioral and health sciences. Issues surrounding validity and reliability of measures will be discussed in detail. Students will be given an opportunity to critically evaluate existing measures and to propose how a new measure can be developed and evaluated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8004. Application of Health Outcomes Measurement Science. 3 Credit Hours.**

This course focuses on the integration of measurement science and health outcomes with a focus on application of mixed methods to develop a health outcome measure in a project of value to the student. The course will also provide a deeper consideration of technology and electronic and mobile health application platforms for operationalization of their outcomes project. Standards and guidelines for development and qualification of measures as clinical trial endpoints through the FDA process will provide a structure for the projects. Each student will present their proposal which will be framed either as a project, FDA clinical outcomes assessment qualification package or grant proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HRPR 8001 and (HRPR 8002 or HRPR 8003)

**HRPR 8101. Bioethics and Ethical Decision-Making. 3 Credit Hours.**

This seminar course is designed to facilitate interdisciplinary dialogue and approaches for ethical decision-making. Students from many health disciplines can engage in bioethical discourse. Students can increase their understanding of ethics within the context of research and health care, identify and consider moral and professional values and preferences when collecting information and making decisions, and recognize the importance of collaboration when making bioethical decisions. The student reflects on personal decision-making through an exploration of the results of the Myers-Briggs Type Indicator (MBTI).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8102. Cultural Competence in Health Studies. 3 Credit Hours.**

This course emphasizes culture as a defining characteristic of our diverse society and examines a multitude of its implications for culturally sensitive and competent health-care service, policy-making, and system transformation in a transdisciplinary and transcultural context. The course begins with contextualizing key concepts such as cultures, health disparities, cultural competence, cultural sensitivity, multicultural health, cross-cultural concepts of health and illness, and complementary/alternative medicine and spirituality. Communication, education/training, programming, and ethical issues central to promoting cultural competence in the healthcare system are then addressed. In addition, the course gives insights into specific cultural groups, including Hispanic, African, Asian, Native, and Caucasian American populations, as well as aging populations and individuals with unique sexual orientation. Key challenges and opportunities concerning cultural issues facing the current health fields are also examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8103. Health Across the Lifespan. 3 Credit Hours.**

This course will provide an interdisciplinary lifespan-oriented overview of the health construct spanning from prenatal influences through to extreme longevity, with an emphasis on its inter-relationships with biological, behavioral, and social ecological influences. Particular emphasis is given to methodological, theoretical, and substantive issues needed for synthesis of an interdisciplinary mastery of development and health. By the end of the course, students gain a thorough knowledge of how to measure health of individuals, communities, and populations; an understanding of both the correlates and sequelae of health and development across the lifespan; and an ability to assess the implications of health disparities across the lifespan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8104. Systems Theory and Change Theory. 3 Credit Hours.**

The purpose of this course is to provide the theoretical foundation for all subsequent courses and formal scientific inquiry. Students in this course will use systems theory, change theory, and other integrative theories and models to explore complex health and life-quality related issues with ecological theory providing the planning framework. Students will focus on synthesis and integration of key health-related factors at the micro and macro levels that affect health for diverse individuals, families, communities, cultures, environments, societies and health systems using a lifespan and life cycle approach. They will apply principles guiding interdisciplinary approaches to complex health issues in a holistic manner.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8203. Systematic Rev Hlth Ecol. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8985. Teaching in Higher Education: Health Professions. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRPR 8987. Teaching in Higher Education Practicum. 3 Credit Hours.**

The purpose of the Teaching in Higher Education Practicum is to provide a mentored teaching experience for students who are currently teaching as the instructor (not just a grader). Building on the content discussed in the prerequisite course, the focus of this course is to apply the skills and reflect on teaching practices in real time. Through paired critiques and group discussions, students will work together to share teaching experiences and problem solve. Students are encouraged to develop strategies and approaches to teaching that can be tailored to their circumstances.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HRPR 8985.

## Healthcare Management (HCM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HCM 5101. Health Systems Organization and Development. 1.5 to 3 Credit Hour.**

This course describes and analyzes the "physiology and fluid mechanics" of national, regional and local delivery systems, exposing students to the flow of funds and the resulting patterns of use, expenditure and health outcomes in these systems. Basic epidemiological concepts and their application to population-based health management are introduced. Current regional data, live case presentations and guest lecturers will be used where appropriate to translate abstract concepts into vivid concrete realities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5102. Healthcare Organizational Leadership and Strategy. 3 Credit Hours.**

This course covers organizational and management theory, and the application of these principles to health services organizations. Emphasis is placed on current trends in health care organizational structure that will affect performance, quality and inter-organizational relations in the future, and the values and principles of health management as a profession. Responsibility of health systems for the health of populations as well as the provision of high quality clinical services is emphasized. The course utilizes information from the textbook and current management publications; guest lecturers; case analyses, both published and live, that provide important insight into the workings of health services organizations; and personal experiences of the instructors and class participants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HCM 5101.

**HCM 5103. Financial Management of Healthcare Organizations. 3 Credit Hours.**

Current practices in financial management of health care operations, including the development of operational and capital budgets, business plans, and methods for measuring financial performance, and assessing the impact of alternative contractual arrangements with third party payers. The live cases studies will deal with the issues related to practice acquisition, and the financial insolvency of health plans and delivery systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (HCM 5101 or (HCM 5601 and HCM 5602)) and (ACCT 5301, ACCT 5401, ACCT 5001, or ACCT 5003)

**HCM 5104. Healthcare Law and Information Technology. 3 Credit Hours.**

This course deals with a shifting agenda of issues faced by health care managers such as those related to acquisition of capital, ensuring regulatory compliance, emerging health markets (e.g. assisted living, focused factories, etc) and health related information technology and e-commerce. The course includes live case studies and group projects related to these topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5105. Healthcare Info Systems. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5106. Advanced Hlth Econ & Fin. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (HCM 5101 or (HCM 5601 and HCM 5602))

**HCM 5170. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 5180. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 5182. Independent Study. 1 to 6 Credit Hour.**

Directed study of health services management projects under supervision of an appropriate graduate faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 5185. Sum Admin Res Sem. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 5190. Special Topics-HCM. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 5601. The Organizational Structure of the US Health System. 1.5 Credit Hour.**

This course provides a systematic overview of the United States Healthcare Services System focusing on its historical, current, organizational, human resources, and educational dimensions. Contemporary issues confronting the system's organization and operation are addressed. The purpose of this course is to provide graduate students with a common basis of information about the characteristics, components, and structure of the U. S. Healthcare System, in order to acquaint students with the various institutional mechanisms through which healthcare services are delivered in the U.S. Special emphasis will be placed on the acquisition of a functional knowledge of key technical terms commonly used in health care delivery. At the conclusion of the course, all will have a common ground and knowledge base from which to progress. Thus, this course also provides the student with an awareness of factual information, data and statistics, technology and terms and concepts unique to health care delivery systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5602. Market Forces, Regulation and Policy in the US Health System. 1.5 Credit Hour.**

Health Policy and Regulatory Analysis began in the 1930's as an area of rigorous systematic evaluation in the United States. It struggled to find ways to finance and organize health services rationally, assuring that the basic health needs of a population were met. Its practitioners had a strong bias towards capitated financing and regionalized delivery networks. These efforts, however, largely remained academic exercises, attacked by the hospital and medical mainstream. Federal legislation that might have incorporated some form of universal coverage was stymied. In its place a fragmented, voluntary, patchwork system of healthcare financing and delivery evolved. How do you make the system accountable to their purchasers, enrollees and to the public as a whole? How much can you really rely on market forces (as exemplified by the total reliance on private insurance as the vehicle for implementation) where health risks and the ability to pay for their consequences are so unevenly distributed? How do you re-tool the infrastructure to improve health and reduce costs in a community fragmented by provider competition? All of the traditional boundaries are blurring between public health and private health care, between drug and alcohol treatment, mental health and acute care services and even the schools and criminal justice system. Never before has answering such questions been as central to defining our national identity and in determining our long-term social and economic future!

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5603. Population Health Management. 1.5 Credit Hour.**

Two of the most important trends facing healthcare providers include increasing responsibility for population health and quality improvement. The Affordable Care Act of 2010 and market forces are compelling healthcare organizations to adopt innovative organizational forms such as accountable care organizations and patient centered medical homes that rely on the use of epidemiological data for purposes of program planning and assessment. Both internal and external health data are used for purposes of managerial decision making. Welcome to the era of "big data." This course will be devoted to the application of managerial epidemiology to the strategic management and quality improvement processes that will assure effective performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5604. Analytic Foundations of Health and Healthcare. 1.5 Credit Hour.**

This course will address how people purchase health care and the implications of people's purchasing behavior for pricing health care goods and services. We will begin with a discussion of health as something a person invests in, that depreciates over time, and that requires an individual to make decisions now based on future expectations. We will then move into a discussion of some concrete principles for determining the value of a good or service in the health care market. We will include basic concepts of comparative effectiveness analysis (comparing two services regardless of cost) and cost benefit analysis (determining how much people are willing to pay for a service and comparing it to the cost of provision). We will then go through some specific applications of these principles to actual health care services. Finally, we will address how health insurance affects the decision-making process. The course will incorporate health care practitioners to move students through case analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5605. Healthcare Market Structure and Strategy. 1.5 Credit Hour.**

This course will look at the market structure of the health care industry from a strategic perspective. The health care industry has several unusual characteristics: there are a large number of nonprofit firms, much of the financing comes from government sources, and service quality is difficult to measure (as it also is in markets such as law, auto repair, etc.). We will first examine how nonprofits and for-profits can be expected to behave differently when making decisions. We will then look at how providers and insurers interact with each other, focusing on what strategic tools health care providers and insurers have at their disposal. Next we will look at a key element of integrated healthcare delivery: the bundling of multiple services into single products or product lines. Finally, we will examine the role of principal-agent problems (where a principal hires an agent, but cannot fully observe the agent's actions) in the context of the physician-patient relationship and the provider-insurer relationship. The course will incorporate health care practitioners to move students through case analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**HCM 5606. Financial Analysis and Managerial Accounting for Healthcare Organizations. 1.5 Credit Hour.**

This course focuses on the application of financial analysis and managerial accounting for healthcare organizations. The reading, discussion, lectures, cases, problem sets and presentations (from industry representatives and fellow students) are the main learning tools. Key topics include reimbursement, utilization, quality and healthcare costs. The primary organization type focused on in the text is the hospital, but other types of organizations with different business models, such as pharmaceutical firms, physician group practices, managed care organizations, and insurers, will be considered. Particular attention will be given to the differences between for-profit and non-profit organization types in health. We will also discuss the perspective of payers (governments, employers, individuals).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5607. Corporate Finance and Strategy in Healthcare. 1.5 Credit Hour.**

This course focuses on the application of strategy and financial analysis for strategic and tactical decisions in the health care sector. The course will primarily be case based, but we will also include select readings and problem sets, lectures and presentations (from industry representatives and fellow students) to facilitate learning. The course assumes working knowledge of corporate finance (e.g. NPV/IRR, Modeling Cash Flows in Excel), general managerial accounting (Working Capital, Fixed/Variable Costs, Budgeting) and ability to interpret and use financial statement (Income Statements, Cash Flow Statement, Balance Sheet). A background or prior course on the structure of the US healthcare system is also helpful. In order to ensure that students understand and can apply important financing methods for various health organization types, select cases may include: NPV for a Long-Term Care Expansion of a Non-Profit Academic Health Center; Risk analysis for pharmaceutical development; Cost accounting in Hospitals; Working Capital simulation for a OTC pharmaceutical start-up; M&A and Valuation of health service organizations; International markets and currency risk in pharmaceuticals; Premium development for health insurers. By applying these finance and strategy tools in a health setting, we hope to make students more aware of unique aspects of the health sector and improve their ability to contribute to applied decision-making for organizations that produce and deliver healthcare.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5621. Healthcare Analytics. 1.5 Credit Hour.**

The ability to analyze data and interpret the results of statistical analyses is an important skill for all students who plan to enter the health care industry. This course will examine several statistical models that are useful for the analysis of health care data. We will apply these statistical models to problems within health care organizations (such as estimating the effect of a new process change) and within the larger context of health care markets (such as predicting demand for a new hospital program). Although students will be expected to understand the basic statistical foundations of these applications, the focus will be on using statistical tools to find patterns in real-world data. Students will learn how to perform these analyses using Microsoft Excel. Specific topics covered will include program evaluation, least squares and logistic regression, determining causality, and choice models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5622. International Health Systems. 1.5 Credit Hour.**

In most OECD countries, healthcare is an important component of the economy - typically responsible for 10% of GDP or more. Healthcare markets in emerging countries and middle income markets are also growing rapidly and are increasingly important sources of revenue for multinational healthcare firms. This course examines the comparative structure of health care systems/markets in different countries, focusing on insurance mechanisms, financing and delivery systems for healthcare. Prototypical approaches to healthcare in developed countries include National Health Systems (UK, Canada), Social Insurance Systems (Germany, Japan) and Market-focused systems (US, Singapore). We will also discuss systems in middle income and emerging markets (China, India). Important themes include the relative roles of private sector and public sector, the effect of system design on cost, quality, efficiency and equity of medical services, rationing of resources and evaluation of these countries as markets. We will examine how many of the policy/market issues in the US also are relevant for other countries and vice versa.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5623. Healthcare Risk Management and Patient Safety. 1.5 Credit Hour.**

Healthcare organizations (HCOs) like all other types of firms are exposed to the uncertainties of facing losses due to substantial risk exposures. The uncertainty of facing losses may prevent the firm from maximizing stakeholder value as well as render it less competitive in the healthcare market. Exposure to future uncertain losses may arise from a variety of uncertainties; the ability to identify and manage these risk so as to maximize the HCOs long range growth, profitability and maximization of stake holder value is the primary goal of healthcare risk management. In the healthcare setting, risk management is essentially inseparable from healthcare law, patient safety and quality. Thus, the course includes modules in healthcare law, patient safety and quality. In addition, we will explore both patient safety and quality as outcomes of the risk management process. This course focuses on the enterprise approach to the risk management process as it pertains to HCOs. The primary focus will be on identification of exposures, applying the risk management paradigm to manage those exposures to loss with an emphasis primarily on loss control methods. General risk financing techniques will also be explored. The relationships and synergies among risk management, quality improvement and patient safety will also be explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5624. Pharmaceutical Trends, Issues and Policies. 1.5 Credit Hour.**

This course utilizes in-class discussions, guest lecturers, case studies, current published academic research, industry publications, and business policy writing to understand the trends and complex issues facing the pharmaceutical industry. Students will explore business strategies and public health policies that companies and governmental institutions respectively can take to find solutions to critical pharmaceutical issues while mitigating policy implementation risk. Analyses of these trends, issues, and strategic policies will cover the entire life-cycle of a drug, from pre-discovery through to post-patent expiration. Complementary developments that affect the pharmaceutical industry and patient health in areas such as medical devices, imaging and diagnostic equipment, and smart phone technology will be discussed. The ultimate objective is to assist students in developing and applying strategic thinking competencies through study and practice in formulating business and health policy positions on various issues critical in addressing unmet patient medical needs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5625. Strategic Context of the Pharmaceutical Industry. 1.5 Credit Hour.**

This course examines specific topics in-depth critical to the future of the pharmaceutical industry. This course utilizes in-class discussions, guest lecturers, current published academic research, and industry publications to explore the future of this vital industry. While the proportion of national health expenditures spent on pharmaceuticals is significantly less relative than money spent on hospitals and physicians respectively, it is a very critical component for society in achieving its overall health policy goals. Focus will be on factors necessary for growth in R&D productivity, new commercial models necessary to capitalize more efficiently and effectively new drugs, and the formation of an overall regulatory environment necessary for continued drug innovation. An exploration of trends happening in healthcare as well as those occurring externally such as those in the consumer packaged goods industry and technological developments (medical devices, imaging and diagnostic equipment, and smart phones) will be undertaken to determine their effects on the future of the pharmaceutical industry and patient health. This course will be devoted to the application of an interdisciplinary and holistic systems approach to understanding the forces shaping the future of the pharmaceutical industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5651. Healthcare Leadership and Strategy. 1.5 Credit Hour.**

The course utilizes in-class discussion, guest lecturers, case studies, current healthcare management literature and the monitoring of environmental trends all in the context of management and organizational theory to understand issues facing healthcare organizations and managerial actions and strategies that help those organizations to maintain high levels of performance. Emphasis is placed on the application of organization theory and behavior to the analysis and interpretation of factors that will affect performance, quality and inter-organizational relations in the future, and the values and principles of health management as a profession. The ultimate objective is to assist students in developing and applying managerial and leadership competencies through study and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HCM 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 9090. Spec Topic Hlthcar Mgt. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HCM 9183. Directed Study-Hlth Adm. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Higher Education (HIED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HIED 5101. Introduction to Higher Education. 3 Credit Hours.**

The purpose of this introductory seminar is to provide a foundation in the theory, research and practice of higher and post-secondary education. This course examines the history and philosophy as well as contemporary issues related to the development, missions, and functions of American colleges and universities. The course introduces graduate students to the interdisciplinary field of higher education which bridges theory, practice, policy and empirical scholarship. Course content aims to enhance and develop students' abilities to critically understand higher education as a site of opportunity and challenge and how these institutions continue to adapt to social, political, economic and demographic forces.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5102. Administration of Higher Education. 3 Credit Hours.**

This course is designed to help students develop their own practices as principled and effective higher education leaders. Successful administrators have to understand the complexity of the organizations in which they work as well as the political, economic, and social ecosystems in which those organizations are situated. This course helps students understand how to situate particular higher education administrative challenges (retention and student success, equity, learning and assessment, etc.) within the complex organizational and governance structures of higher education institutions. The course also explores theories of organizational culture, learning and change through which administrators can effectively make sense of and address the most pressing challenges in higher education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5103. Access and Equity in Higher Education. 3 Credit Hours.**

This course covers theory and best practices to help professionals better prepare students underrepresented in higher education for what it takes academically and personally to enroll in and transition through college and onto careers. Focal areas will include: pre-college programs created and designed to assist these underrepresented students and connecting student access and success programs as partners with institutions of higher learning. This course will also provide strategic planning models to assist course participants in analyzing how access and success programs can be an integral part of an institution. Students gain more knowledge of access and equity concerns and the resources necessary to help students successfully navigate postsecondary opportunities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5104. College Students and Development Theory. 3 Credit Hours.**

This course covers theories, perspectives and research that inform contemporary college students' development and experiences. The study of American college students reflects the history and development of social and cultural issues that have marked the society's general development. The perspectives and experiences of contemporary students in colleges and universities inform institutional policy as well as directives for the larger society. This is an introductory course focused on students in higher education as an area of professional practice and research. Course content examines theory and college as theoretical context, student development and identity formation within and beyond higher education institutions and links theory with professional practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5201. Diversity Issues in Higher Education. 3 Credit Hours.**

While colleges and universities have historically struggled to attract and retain students from diverse populations, growing political, economic and ethical demands of the day have forced many to revisit their institutional commitment to diversity and inclusion. This course is designed to provide students the opportunity to critically examine the impact of diversity on all postsecondary stakeholders including students, staff, faculty members, administrators, policy makers, local community members and employers. Using various theoretical models, this course will also help students develop a shared language around diversity, assess institutional missions and responses to diversity and inclusion, and finally, to develop a knowledge base to support strategies for inclusive advising and student support practices in higher education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5202. The Costs of College. 3 Credit Hours.**

This course provides aspiring leaders, administrators and academics with an overview of economics and finance in higher education. The premise of this course is that in today's increasingly demanding higher education environment, with challenges such as budget cuts, rising institutional costs, tuition pressures, affordability, access and success, the most effective higher education leader must possess at least a basic understanding of postsecondary economics and finance. This course is designed to instill that knowledge, as well as to provide students with an opportunity to critically analyze the literature, issues, and recent trends, for purposes of both practical application and ongoing research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5203. Getting into College: Strategic Enrollment Management. 3 Credit Hours.**

This course focuses on topical issues in enrollment management in higher education and is intended to serve as an introductory seminar. As such, it aims to provide a forum for thoughtful and meaningful discussion of readings and materials related to strategic activities in enrollment management. The course supports the notion that practice of admissions is not a singular independent activity, but in fact, is an integral part and linked to what we know about the development, mission, and current student profile issues that influence institutional practice. Therefore, the course uses current readings and research (e.g., journal articles, books, higher educational newspapers, reports, and internet resources) to examine issues at the core knowledge base of enrollment management theory and practice in higher education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5204. Diversity Facilitation and Leadership. 3 Credit Hours.**

This course introduces students to the practice of leading diverse groups in a variety of settings through Dialogue facilitation. Leading diverse groups requires, first, the group leader's self-awareness about his/her own positionality and attitudes regarding diversity; the students' ability to review their personal and professional masks, and develop an understanding of the ways our fears influence our attitudes toward authority and power and thus our ability to experience and participate in a diverse and inclusive environment. Secondly, students will learn the capacity to develop trust, shared motivations, and cooperation among diverse group members. This course deepens students' understanding of how to work with diverse groups in educational settings. The development of real cooperation in a group involves understanding the socio-psychological bases of personal and intergroup relations so as to recognize the deep obstacles to change in order to overcome them. In this course, students will begin to work with various frameworks of facilitating social justice practices, such as Transformational Social Therapy (TST), which helps people overcome the personal, social and professional issues that create mistrust among and within groups and impedes real cooperation. TST concepts to be explored include social pathology, social crises, and moving from violence to constructive conflict. Students will also be introduced to the relevant literature on intergroup relations through the Michigan Model of intergroup dialog, the emotional life in groups and the practice of leading diverse groups. Additionally, students will experience other DEI strategies that will help to build their toolkit for facilitation and creating a more socially just educational environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in HIED 5201.

**HIED 5301. Planning and Assessment in Higher Education. 3 Credit Hours.**

This course provides an overview of the accreditation, planning and assessment processes in higher education. It is a graduate-level seminar designed to introduce students to theory, uses, and outcomes of planning in higher education. Strategic planning is a long-standing practice in the business world, but planning--as a proactive and integrated activity--is an expanding practice in American colleges and universities. The course explores accreditation processes particularly how institutional self-assessment and adherence to standards for student learning outcomes assure higher education's internal and external publics that accredited institutions are fulfilling their stated purposes and addressing public and policy expectations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5401. Student Affairs in Higher Education. 3 Credit Hours.**

This course is a survey to student affairs as an area of professional practice in higher education. Course content examines the organization and administration of student affairs in postsecondary institutions in the United States and also encourages the application of research and theory to student affairs practice. Specifically, theories, research, and methods are introduced to encourage reflective application to professional practice. Learning objectives and outcomes for the course will be achieved by exploring the following topics: administrative environment of student affairs; organizational and management issues related to student affairs; essential skills and competencies for student affairs administrators and leaders; diversity/equity issues in student affairs; assessment; professional development; and future challenges and opportunities for professional practice in the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5502. Digital Education Leadership. 3 Credit Hours.**

This course develops prospective online higher education leaders' vision, skills, and knowledge necessary to responsibly facilitate and sustain online education programming within post-secondary institutions. The premise of this course is that in today's increasingly digitized and online higher education environment - one that has given rise to new forms of faculty development, academic support systems, interdepartmental relationships, and federal/state policies - the successful higher education leader must nurture a vision that will advance both the institution's mission and diverse learners' individual goals. This course is designed to provide students with an opportunity to critically analyze the literature, emergent trends, and various professional standards for purposes of both practical application and ongoing evaluative research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5801. Gender Issues in Education. 3 Credit Hours.**

This graduate-level seminar serves as a survey of gender issues across the education pipeline. Course content is based on studies of primary, secondary and college settings with implications for administration and leadership. This course examines gender issues including identity development and constructions within diverse education spaces. Placing gender at the center of discussion about education, this course connects research to practice and policy. The perspectives and experiences of contemporary students as well as educators inform this "practice and policy" of gender. Although gender is at the heart of this course, considerable emphasis is also placed on the intersection of race, class and sexual orientation in education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5802. Leadership in Higher Education. 3 Credit Hours.**

While many higher education classes on leadership focus on the functional roles and hierarchical structures of leaders within postsecondary educational institutions, this class centers on the development and expression of individual leadership qualities. Current theories of leadership will be explored as well as the interpersonal skills necessary to be an effective leader within higher educational institutions. Topics will include: The self-reflective leader, career planning assessments, leadership theories and practices, communication skills for leaders and reflections and recommendations from current exemplary leaders in colleges.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5803. Law and Policy in Higher Education. 3 Credit Hours.**

This course is designed to provide an intensive theoretical and pragmatic inquiry into the ways that higher education administrative practice is regulated. The course examines regulation not just in terms of the legal institution (i.e., case law and the courts) but also as the array of social and political structures that impact the delivery and management of postsecondary education. In addition to major legal events and controversies impacting higher education, students will become familiar with key federal regulation, state and federal policy, and internal institutional regimes of authority, as well as "soft" regulatory mechanisms of markets and social norms. The course helps students understand the nature of law, policy, and regulation as social structures impacting practice in higher education, and provides a critical overview of current key areas of law, policy, and regulation influencing practice in higher education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 5804. The Community College. 3 Credit Hours.**

This course provides a critical analysis of the characteristics, scope, public policy issues, and impact of community and two-year colleges in the United States. Institutional types presented in this course include traditional community colleges, two-year colleges, junior colleges, proprietary schools, and branch campuses. The course introduces students to historical landmarks in the development of community colleges; describe and analyze the impact and implications of the current characteristics, status, and student demographics of community colleges including their role in increasing national college graduation rates. Community colleges' position and role in the higher education landscape are investigated with attention to their external organizational systems and financial structure including state systems, university systems, corporate structures, and other affiliations. A wide range of curricula issues are examined, including transfer articulation agreement, liberal arts, vocational/technical/career, continuing and digital education, and developmental/remedial programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 8093. Advanced Higher Education Research Seminar. 3 Credit Hours.**

The Ed.D. in higher education is a rigorous program that is built around aligned and integrated content related to the study of higher education and practice. Students in the program develop proficiency in research methods and data analysis through course work. This advanced research seminar is designed to provide students with structured preparation for writing a literature review and other competencies evaluated in the comprehensive examination. During the seminar, the development of a literature review and preparation for the doctoral comprehensive examination will be combined. Doctoral students will be enrolled in this seminar as they complete all required coursework for the program or it should be taken immediately following completion of coursework. The seminar serves as intensive groundwork for the comprehensive exam and all students will take the exam at the end of the advanced research seminar course. Given this intentional link to preparation for the comprehensive examination, the seminar will focus on developing students' ability to: Situate and define a chosen topic within the concepts and history of the field; Compare, contrast, and justify various research methods appropriate to investigate a practice-based research problem in higher education; and Critically synthesize the extant scholarly and practice-focused literature that informs topic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 8101. Advanced Seminar on Higher Education Administration. 3 Credit Hours.**

HIED 8101 is an advanced seminar focused on higher education administration as an area of professional practice and research. Course content examines the organization and administration of higher educational institutions and links the application of research and theory to practice. Learning objectives and outcomes for the course will be achieved by exploring the following topics: higher education as a social good; administrative environment of higher education; organizational factors related to how universities and colleges function; assessment competencies for administrators and leaders; diversity/equity and cultural issues; and future challenges and opportunities for professional practice and research in higher education. During the course, students will explore a variety of roles higher education administrators play on university/college campuses and seek to develop an understanding of how institutional cultures (and professionals' roles within those cultures) facilitate institutional effectiveness. Specifically, this course is designed to critically engage students' thinking about higher education institutions through discussing contemporary issues, problems, trends, administrative practices, leadership and post-secondary opportunities. An initial brief review of current and lingering challenges of higher education in the United States will help ground the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 8102. Higher Education Economics and Finance. 3 Credit Hours.**

This course provides doctoral students with a comprehensive overview of economics and finance issues in higher education. The premise of this course is that in today's increasingly demanding higher education environment, with challenges such as budget cuts, rising institutional costs, tuition pressures, affordability, access, and so on, the successful higher education leader must possess at least a basic understanding of postsecondary education economics and finance. This course is designed to instill that knowledge, as well as to provide students with an opportunity to critically analyze the literature, issues, and recent trends, for purposes of both practical application and ongoing research. This course addresses theoretical and practical aspects of higher education administration. The theoretical components are based primarily on the readings. The practical aspects derive from the professor's experiences as a university administrator, from the experiences of members of the class and from reading about current events and cases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 8103. Equity in Higher Education Policy and Practice. 3 Credit Hours.**

This doctoral course on equity in higher education covers theory and best practices related to under-represented groups in higher education. This course will engage critical issues informed by research, policy and practice relating to access and equity in higher education. Special attention will be given to the ways in which race, gender, class, and the intersection of these social identities influence equity considerations in higher education. The course will specifically examine what it takes structurally and institutionally to enroll and transition traditionally marginalized students to post-secondary education. Focal areas will include: pre-college programs and policy created and designed to assist these students and connecting access and equity programs as partners with institutions of higher learning. Course participants will gain more knowledge about research on equity issues and the practices necessary to help students successfully navigate postsecondary opportunities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HIED 8104. Seminar on Theory in Higher Education and Leadership. 3 Credit Hours.**

This seminar is designed to provide doctoral students a general understanding of (1) what theory is and how it guides scholarly research and effective administrative practice in higher education, and (2) major theoretical perspectives, frameworks, and paradigms that inform higher education research and practice. The course is not meant as an exhaustive survey of all theory relevant to higher education. Rather, the course is intended as an intensive seminar to help students develop the skill of identifying, understanding, and applying theory related to applied research and practice. The following broad questions guide the course: What are the differences between theories, paradigms, conceptual models and frameworks, and epistemologies in higher education? Why is theory important to higher education research and to practice? What are the differences between "micro" and "macro" or "meta" theory? When is each appropriate or helpful in research and practice in higher education? How do we employ theory in research and how does the role of theory differ between qualitative and quantitative methodologies? Where and how does theory appear in a dissertation proposal?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 8262. Advanced Practice-Based Qualitative Research in Higher Education. 3 Credit Hours.**

This doctoral course is intended to provide a forum for advancing qualitative research strategies in the practice of higher education. The course extends the study of foundational philosophies, standpoints and uses of qualitative inquiry. Designed to help doctoral students in higher education develop a critical understanding of the various considerations and stages of qualitative research, this course includes the development of researchable questions, understanding theoretical and conceptual frameworks, and using methodological strategies such as data collection and analysis. Course readings, assignments, discussions, and learning activities will expose students to qualitative studies in the higher education literature. In doing so, the course aims to prepare students for qualitative approaches that may be part of their dissertation research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIED 8287. Research Practicum. 3 Credit Hours.**

This course is designed to provide graduate students with faculty-directed research experience. The purpose of this research practicum is to provide a bridge between students' doctoral coursework and methodological training and their independent dissertation research. Students will work with their faculty advisor and the sponsoring faculty member to identify research projects that are relevant to their interests while also developing skills and practices that will be applicable in other research contexts. Please note that this course is not intended to be a substitution for HIED 8093 Advanced Higher Education Research Seminar. Students seeking to engage in research on a focused topic would take HIED 8287 as an elective prior to or concurrent with enrollment in HIED 8093. For the research practicum: 1. Students may work with a faculty member on an ongoing study or as part of the faculty member's research team. 2. Students may be given primary responsibility for a discrete portion of a faculty member's ongoing research project. 3. Students may develop a full research proposal or do independent research on an approved topic under the direction of a faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in HIED 8101, HIED 8102, HIED 8103, and HIED 8104.

**HIED 9995. Master's Capstone in Higher Education. 3 Credit Hours.**

In this course, students completing a master's degree in higher education will work with an advisor to construct a capstone project. Drawing on the program's core ideas students will complete a summative project in which they apply these ideas to a real-world problem in the field. The final product for the course will include a written document summarizing this work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## History (HIST)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HIST 5010. Special Topics in History. 1 to 3 Credit Hour.**

Variable content course. Consult department for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 5151. Nonprofit Management for Historians. 3 Credit Hours.**

This course provides an introduction to the non-profit based management, leadership and administration issues and practices for historical and cultural heritage organizations. The goal of this course is to provide students who will be entering the public history field with the background knowledge and tools to be effective managers and leaders in their institutions. Students are introduced to the complexity of issues in historical management and administration as reflexive practitioners and engage a wide variety of case studies, issues analysis, and real-life examples from local historical institutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 5152. Digital History. 3 Credit Hours.**

The definition of digital history is amorphous, broad, and often debated. Digital history projects may refer to everything from an online exhibition to a podcast to mapping and geographic information systems. This class will explore digital history in terms of the questions of narrative, shared authority, access, and historical analysis that arise when using digital tools for working with history. We will discuss the major issues involved in digital history initiatives and gain familiarity with various technologies often used in such projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**HIST 5187. Public History Practicum. 3 Credit Hours.**

The public history practicum allows students to intern in historical organizations while learning from one another in periodic classroom meetings. Internships balance student interests with the needs of partnering institutions. Each student must complete 140 hours of work under the supervision of an experienced public history professional in addition to writing assignments devised and evaluated by a faculty internship supervisor. Students must contact the director of the Center for Public History about their intent to enroll by no later than the midpoint of the semester preceding the practicum.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 5280. Special Topics: American. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 5400. Special Topics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 5480. Special Topics: European. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 5540. Special Topics in Latin American History. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 5670. Special Topics in African History. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 5680. Special Topics in Asian History. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 5800. Comparative Women's History. 3 Credit Hours.**

Exploration of two to three selected topics in women's history in comparative, global perspective. Topics may include: 1) gender, race, and state; 2) women, religion, and social change; 3) women in industrializing societies; 4) domestic contestations; 5) histories and theories. See current semester description.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may be repeated for additional credit.

**HIST 5880. Special Topics in World or Comparative History. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 8001. Environments, Cities, and Cultures. 3 Credit Hours.**

This course introduces graduate students to one of the two specialties in the History Department, which comprises environmental, urban, and cultural history. It is highly recommended for first-year PhD students who will take the preliminary exam in this specialty in their third semester. In it, students will read several books that will be later tested in the preliminary exam, in addition to learning about some of the more consequential and innovative works in the historical profession. The readings will be global and comparative in nature, and thus relevant to students specializing in US and non-US history alike.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8002. War, Empire, and Society. 3 Credit Hours.**

This course introduces graduate students to one of the two specialties in the History Department, which comprises military, imperial, and social history. It is highly recommended for first-year PhD students who will take the preliminary exam in this specialty in their third semester. In it, students will read several books that will be later tested in the preliminary exam, in addition to learning about some of the more consequential and innovative works in the historical profession. The readings will be global and comparative in nature, and thus relevant to students specializing in US and non-US history alike.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8101. Introduction to American History I (to 1865). 3 Credit Hours.**

This is the first segment of the Introduction to American History readings seminar required of all M.A. and Ph.D. students in U.S. History. Doctoral students are required to take both courses in this sequence. M.A. students must take one of the two segments. This segment covers the colonial era through the Civil War.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 8102. Cultural History. 3 Credit Hours.**

Investigates ways that historians and other scholars have interpreted modern popular culture, 1800 to the present. American media, sports, entertainment, fashion, art, as well as American myths, ideas, and popular thought are some of the topics that will be explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8103. Studies in American Diplomatic History. 3 Credit Hours.**

Readings in and discussion of the principal schools of interpretation and conceptual frameworks in the history of U.S. foreign relations as a means to introduce students to the subfield. A complement to Studies in the Cold War (HIST 8209), the chronological parameters extend from the Revolutionary era through the conclusion of World War II. In addition to completing weekly reading and writing assignments, and as a final assignment a comparative review essay, students will participate actively in class conversations about history and historians.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8104. Studies in African American History. 3 Credit Hours.**

The emphasis is on the period since the Civil War. Possible topics include Reconstruction and rise of segregation; urbanization of the black population; history of black women in U.S.; Civil Rights revolution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8105. History of Education. 3 Credit Hours.**

This course focuses primarily on the way that educationally institutions, broadly construed, have shaped American culture and society. Special attention is paid to recent historiographic debates concerning education and its social effects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8106. Modern American Social History. 3 Credit Hours.**

The theme of the course in recent years is Race, Ethnicity, and Poverty in the U.S., 1870-1940. The main subject is the impact of industrialization and urbanization on the working class, the poor, and minority groups during the period when the U.S. emerged as an industrial power. Attention is also given to the response to poverty, both by private charities and the state.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8107. Religion in Modern United States. 3 Credit Hours.**

This course explores the history of religion in the United States between 1877 and the present. In the past decade a cadre of creative scholars has focused their attention on American religious history. They have transformed the field: it is far more capacious, lively, and sophisticated than it was ten years ago. This course provides students with an introduction to the field. It also offers them a chance to focus their attention on a set of questions related to historians' determination to take religion seriously. What does it mean to do take religion seriously? What is the opposite of taking religion seriously supposed to be? In what ways, if any, has the determination to take religion seriously hampered the development of the field?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8111. Introduction to American History II (since 1865). 3 Credit Hours.**

This is the second segment of the Introduction to American History readings seminar required of all M.A. and Ph.D. students in U.S. History. Doctoral students are required to take both courses in this sequence. M.A. students must take one of the two segments. This segment covers the Civil War to the present.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: History.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Liberal Arts.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8151. Studies in American Material Culture. 3 Credit Hours.**

Introduction to literature from several fields that use artifacts to understand culture. Exploration of various theoretical approaches. Topics include architecture, folk art, photography, decorative arts, landscape design, historic preservation, and the use of interior space.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8152. Managing History. 3 Credit Hours.**

This course explores the practical considerations and theoretical issues concerning the management/ownership of the interpretation, preservation, and presentation of history for public consumption. Emphasis is placed on public management policies and methods of private ownership of critical historical issues, including, but not limited to, museum exhibits, historical preservation policies and practices, governance of historical societies and museums, publication practices, historical documentaries (aural and visual), and other elements related to the dissemination of historical interpretations, common historical knowledge, and public memory. This course asks: Who manages American history and American memory? Who Owns History? Who is empowered to tell the story and how did they gain that power? What role does the historian play in the formulation and preservation of public memory?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8153. Archives and Manuscripts. 3 Credit Hours.**

An introduction to the theoretical and applied aspects of historical records management. Taught in cooperation with local archives and historical societies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8201. History of Philadelphia. 3 Credit Hours.**

Students who enroll in this class will be given an opportunity to analyze the cultural, economic, political, and social history of Philadelphia. Special attention will be paid to immigration, ethnicity, and race.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8202. American Colonial History. 3 Credit Hours.**

A survey of how American society developed before the Revolution: the evolution of American politics and political institutions; the changing imperial system; internal and external conflicts; how the economies and lifestyles of the various colonial regions developed; the role of women; free and forced migration; the foundations of modern American life in the experience, thought, and values of colonists before 1775.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8203. Age of the American Revolution. 3 Credit Hours.**

This is a readings course on the causes, nature, and consequences of the American Revolution. The Revolution has a long, venerable -- and contentious -- historiography; the course examines classic and recent debates, probes different research and narrative strategies, and seeks to understand the possibilities and limits of: (1) understanding the late eighteenth century in light of the Revolution; (2) old and new international and comparative approaches; (3) the tendency to understand colonial and subsequent US history in light of the Revolution; (4) recent trends to highlight and integrate previously neglected topics, including slavery, African Americans, Native Americans; and (5) resurgent interest in "founders" and the Constitution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8204. Early United States Social History. 3 Credit Hours.**

Introduction to American social history from 1800 until the Civil War. Recent research on the structure of American society, the American family, immigration, the worker, urban developments, and the reform movements of the Jacksonian era.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8205. Civil War and Reconstruction. 3 Credit Hours.**

This course focuses on the ordinary citizen rather than the rich and powerful. Much attention will be paid to issues of race, class, and gender.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8206. Studies in Recent American Urban History. 3 Credit Hours.**

This course is broadly interdisciplinary, concerned with major developments in America's large cities from the mid-nineteenth century to the present. Basic issues include: the changing spatial structure of the city, social and geographical mobility, the nature of ethnicity and the Black experience, the development of crime and rioting, the structure of local politics, and the movements for urban reform.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8207. Recent United States History. 3 Credit Hours.**

Presents a new approach to the history of the United States since World War II, focusing on social and economic change. Topics include: urbanization and suburbanization, rise of post-industrial economy, racial problems, shift of population and political power to the Sunbelt, and the impact of new technologies. Relates the political history of the era to these fundamental socio-economic changes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8208. Studies in United States Urban Crime. 3 Credit Hours.**

Examines the significant scholarship and issues involved in understanding the history of crime in American cities, with special emphasis upon the period since the Civil War. The course deals mostly with the organized underworld, including drugs, gambling, bootlegging, prostitution, professional theft, and other on-going criminal activities. By linking the underworld to the city structure, sports history, entertainment, and reform, the course will examine the interrelationship of American urban and social history with the changing underworld.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8209. United States Foreign Policy in the Cold War. 3 Credit Hours.**

Few if any "moments" within America's historical experience have generated the intensely competitive and emotionally-charged debates as has the "moment" called the "Cold War." The purpose of this course is to identify the questions that have bedeviled historians of the Cold War, and by reading competing interpretations, evaluate the strategies by which they have been addressed. Sample topics: U.S.-Russian (Soviet) relations, the nuclear arms competition and arms control, regional rivalries, summitry, alliance politics, cultural instruments of influence, crisis management, intelligence agencies, and critical personalities. Students will read widely, write frequently, and speak extensively.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8211. Rise of the American Military Profession. 3 Credit Hours.**

The overriding purpose of this course is to provide students with a theoretical framework for analyzing the evolution of modern military institutions and the people who lead them. Students will examine the development of the military profession in the United States from the War of Independence through the 1990s. Students will examine contemporary concepts of military professionalism by studying the careers of American officers in their historical context. This course will also address the major European influences that revolutionized standards of officer procurement, training, education, and advancement in the United States and around the world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8212. North American Environmental History. 3 Credit Hours.**

This seminar examines the interactions between human societies and the natural world in North America from the sixteenth century to the present. That relationship is complex: the environment both reflects people's influences and affects human history. Through reading and discussion, participants in this seminar will examine this reciprocal relationship. Topics to be discussed include Native American management of the environment; the effects of the European ecological invasion; resource exploitation in the industrial era; and the evolution of twentieth-century environmentalism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8213. History of the North American West. 3 Credit Hours.**

This seminar examines the history of the North American West from the mid-eighteenth to the mid-twentieth century. The course emphasizes the reciprocity of social and environmental history; cultural interactions in the multi-ethnic West; and the iconography and ideology of the "frontier."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8214. Slavery and U.S. History. 3 Credit Hours.**

This course provides an introduction to the scholarship on slavery as it has evolved within the U.S. field and at its borders in Atlantic and "New World" history. It pays particular attention to the development of key concepts and how different ways of understanding the place of slavery in colonial and American history reflected - and affected - changing interpretations of other aspects of the American past. This inquiry logically culminates in recent work that not only changes how we define the "institution" of slavery - or even whether it makes sense to call it an institution - but which also expands the range of subjects to which slavery can be said to be integrally related.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8301. Introduction to European History. 3 Credit Hours.**

Overview of the field, its shape, main lines of research, and central concerns. Through selected readings, discussion, and guest speakers, participants gain understanding of current practice including political, social, and cultural history, the treatment of Europe in global studies and in contemporary metahistory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8302. Atlantic World 15th-18th Centuries. 3 Credit Hours.**

Examines main aspects of social and economic change in which the Old World and the New interacted in the 17th and 18th centuries: colonization; commercial agriculture and trade; servitude, free labor, and slavery; migration; changing lifestyles and expectations; the development of family and community; religion, reform, and revolts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8303. Studies in Russian History. 3 Credit Hours.**

This course explores milestones in Russian/Soviet history and society during the 20th century. Basic knowledge of European and Russian history is assumed. Students will do intensive reading on the Russian Revolution Stalinism and the Second World War, and on peaceful devolution of communism. The main purpose of this class is to familiarize students with the fundamental issues of this history, provide exposure to diverse interpretations, and promote discussion of research strategies and (to an extent possible) their source base. Special assignments will be encouraged, i.e., individual research that will help enrich class discussions. Writing assignments and oral presentations are the main requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8304. Soviet Cold War- DeStalination. 3 Credit Hours.**

This course is a sequel to the graduate course on Stalinism (History 8121). It studies two groups of literature: one on Soviet Cold War behavior and the collapse of the Soviet empire, and another on the post-Stalin history of the Soviet Union. The course emphasizes internal social-economic, cultural and intellectual developments inside the USSR as a crucial essential (and previously underestimated) factor in Soviet transformation and the peaceful end of the Cold War. This course aims at students who are interested in foreign relations, but also contemporary international history, globalization and social change.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** HIST 8121.

**HIST 8307. 20th Century Europe. 3 Credit Hours.**

Discusses major events in 20th century Europe such as the origins of the First World War, the Bolshevik Revolution, the rise of fascism in Italy and Germany, World War II, and the subsequent collapse of European political dominance. Investigates the Cold War, the demise of communism in Eastern Europe, and the gradual economic and political establishment of the European Union. In addition to a standard historiographic study of these topics, the course includes developments in the "new cultural history" and the history of "representations" and "memory."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8308. Imperialism. 3 Credit Hours.**

To Lenin, imperialism was "the highest stage of capitalism," to Rudyard Kipling, "the white man's burden" and to Joseph Schumpeter, "the object-less disposition of a state to expansion by force without assigned limits." In this course, we both attempt to define imperialism and to understand the various ways in which historians and other scholars have approached the study of imperialism. Focusing primarily on the modern European empires, we examine imperialism from the perspective of economic, environmental, military, diplomatic and cultural history. We discuss Edward Said's extremely influential theory of orientalism and examine how contributions from historians of gender, scholars associated with the subaltern studies movement, and post-modern/post-colonial studies have influenced the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8400. Topics in 20th Century Germany. 3 Credit Hours.**

Readings and discussions on selected topics in modern European history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 8402. Jewish History. 3 Credit Hours.**

Students who enroll in this class are given an opportunity to analyze the cultural, economic, political, religious, and social history of the Jewish people. Special attention is paid to gender and secular ways of being Jewish.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8403. History of European Military Policy. 3 Credit Hours.**

Introduces the literature and problems of Europe's military history since 1789. Examines both the practical and theoretical contributions of the battlefield, the cabinet room, and the individual military leader as theorist. Social and economic factors are also considered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8501. Introduction to the Third World. 3 Credit Hours.**

An introduction to the historical issues and literature concerning broad thematic areas of Third World life such as imperialism, economic development, global economic organization, peasant life, urbanization, migration, nationalism, cultural and social change, the role of the state, and international relations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8502. Vietnam War Studies. 3 Credit Hours.**

This reading seminar explores the significant English- and French-language historical literature on the "Vietnam wars," considered in the large sense of the political and military struggles from 1945 to 1991 for control of the Indochina peninsula.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8505. Studies in Latin American History. 3 Credit Hours.**

Examines Latin America in the age of the Cuban Revolution and beyond, covering the array of new historical literature that continues to emerge concerning the Revolution itself, the rise and fall of insurgencies and national security states in many parts of Latin America, and the more recent period of incomplete establishment of democracy and accountability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8506. Studies in Spanish and Portuguese America. 3 Credit Hours.**

From an empire-wide perspective, this course will analyze this encounter and its consequences and place both in historiographic context. The syllabus will proceed chronologically starting with the history of Spain and Portugal prior to the Conquest and continuing with the Conquest and reorganization of the American space. Rather than provide a detailed description of the historical episodes, however, the course will center around key processes affecting Iberian America, such as the rise of new societies and the transformation of indigenous cultures, the types of rule established by the Spanish and Portuguese, the economic relationship between the metropole and the new American kingdoms, slavery, race relations, the centralizing project of the eighteenth century, and the revolutions of the 1800s.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8610. Studies in Chinese History. 3 Credit Hours.**

Surveys key issues and themes in modern Chinese history. Topics include: the ideology and politics of the China field; long-term patterns of change; peasant rebellions; imperialism; the nature of elite reform; the origins of the revolution; the Nationalists; militarism and state-building; rural revolution and communist success; the Maoist road to socialism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 8701. Introduction to World History. 3 Credit Hours.**

A review of the concept of World History and its historiography; an introduction to materials now available to the study of World History; and an introduction to key themes and conceptual frameworks in the study of World History.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8705. New Themes in the History of Slavery. 3 Credit Hours.**

Comparative social history of Atlantic-world slavery and Red Sea-Indian Ocean-Persian Gulf world-slavery. Slavery in other domains, such as the Mediterranean and Black Sea regions, will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8707. History of Sexuality. 3 Credit Hours.**

Studies recent work on sexuality and its relation to gender, race, class, and power. The course's emphasis is on modern U.S. and Europe because that is where the most theoretically interesting recent work has been done, but the course will also look at the ancient world and pre-modern Europe, and consider cross-cultural.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8713. The Historian and Society. 3 Credit Hours.**

Open to students in Temple's Public History Program and to matriculated graduate students in good standing, this course provides graduate credit for Public History Internships in selected Philadelphia-area historical societies, museums, and cultural institutions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8714. Historical Methods. 3 Credit Hours.**

This seminar is an introduction to the practice of professional history and to historical methodologies. One of the main purposes of the seminar is to familiarize its participants with the methodological and historiographical evolution of professional history. How has the approach of historians to their craft changed in the last century? What assumptions informed the decisions they have been made about how to study the past? In short, we study methodology because it is a way of approaching the questions that are central to historical scholarship: How do we know what has happened? How do we decide what matters? How do we best study the past? Whose version of history is authoritative?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8800. Topics in History I. 3 Credit Hours.**

Introduction to a variety of historical and normally comparative topics and themes in, such as environmental or psychological history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 8801. Cross-Cultural Encounters. 3 Credit Hours.**

Readings and discussion of selected issues in the history of the interaction of various cultures and societies. Special attention is paid to issues of power.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8807. Comparative History - Modern War. 3 Credit Hours.**

Beginning with the emergence of armies and navies that can be considered "modern" because of the professional educational qualification of their officers, this course examines the historical literature dealing with warfare and armed forces around the world from the 17th century to the present.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HIST 8810. Topics in History II. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 8820. Topics in History III. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**HIST 9208. Research Seminar. 3 Credit Hours.**

This research seminar explores a range of subjects not restricted to any geographic area or time period. Students prepare an oral presentation and research paper on a specific subject of his/her choosing but approved by the instructor. The research utilizes some secondary but principally primary sources.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 9683. Readings in History. 3 Credit Hours.**

Students who enroll in this course are given an opportunity to pursue an independent study of a topic of particular interest to them. Their work will be supervised by a member of the graduate faculty of the history department.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 9996. Master's Thesis. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Registration required each semester after Preliminary Examinations while researching the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HIST 9999. Dissertation Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Horticulture (HORT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HORT 8261. Native Woody Plant Identification. 3 Credit Hours.**

This course focuses on the study of native trees, shrubs, and vines that are the foundation of natural and designed landscapes. Emphasis is on identification, culture, association, and appropriate use of plant communities. Students learn to identify a variety of native plants and their uses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**HORT 8514. Landscape Restoration. 3 Credit Hours.**

Students develop an ecologically based understanding of how to establish, restore, and manage meadows, forests, and wetland systems. The course emphasizes natural processes and how to integrate the built landscape with natural systems. Students also explore plant communities and wildlife habitats of Southeastern Pennsylvania. By the end of the course, students know the components of a restoration plan and have developed a plan for a real site.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in HORT 8261.

## Human Resource Management (HRM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HRM 5001. Leading Organizations. 3 Credit Hours.**

How does effective leadership materially contribute to the achievement of strategic organizational objectives? This class explores individual and group behavior and the means through which leaders can influence that behavior. Students will be exposed to research on drivers of employee performance and commitment - both direct (e.g., employee attitudes, motivation) and indirect (e.g., organizational culture, climate, leadership) - and learn about their practical application in the workplace. Emphasis will be placed on improving self-awareness to facilitate the positive workplace experiences of employees.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5051. Developing Human Resource Management Strategies. 3 Credit Hours.**

What is a human resource management strategy and how does effective strategy affect an organization's long-term performance? Given the direct impact of HRM on cost, quality, and productivity, the success of any organization -- traditional or virtual -- depends on the effectiveness of its managers' strategic human resource decisions. This course examines contemporary best practices through the lens of business strategy. It utilizes readings, case studies, and group projects to help students to improve the quality of their strategic HR decision making. Throughout the course, students will review how organizations strategically consider such HR issues as work system design, talent acquisition and management, compensation, and change management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5054. Leadership Development. 3 Credit Hours.**

This course is designed to be a study of human behavior in organizations and the means through which managers can influence that behavior. Specifically, the class will consider key situations where the effective exercise of leadership can materially contribute to the achievement of strategic organizational objectives. The leadership process will be considered within a business environment increasingly characterized by global competition, economic turmoil, rapid technological change and shifting labor market dynamics. Emphasis will be placed on identifying and developing the personal skills and perspectives necessary to establish and maintain a leadership position (e.g., self-awareness and abilities in such areas as communication, decision-making, problem solving and behavioral management).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5111. Influential Organizational Communication. 3 Credit Hours.**

Do you want to build your personal communication capabilities? How about learning to leverage strategic conversations for impactful leadership in your organization? Students in this course apply theoretical knowledge and empirical research for practical purposes using case analysis and class discussion. Varied assignments will enhance student perspective and skills in employee/relationship management, writing and editing, oral presentation, coaching and performance feedback, crisis communication, persuasion and influence, and managing emotional expression.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5112. Leading High Performing Teams. 3 Credit Hours.**

Organizations need effective teams to accomplish important objectives, especially as business becomes more complex and change more dynamic due to factors including globalization and technology. Through readings, written assignments, group discussions, and projects, students will examine strategies to develop and sustain productivity in individuals and work groups such as group formation, goal setting, delegation, group dynamics, and diversity and inclusion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5113. Power, Influence, and Negotiation. 3 Credit Hours.**

Throughout this course, students examine how power, influence, and negotiation support effective leadership. Students will explore ethical and practical strategies for handling organizational disputes and conflicts; identify sources of power in complex interpersonal situations; examine influence strategies; employ appropriate negotiation tactics; and develop a problem-solving style that is value-based and authentic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5114. Building Human Capital. 3 Credit Hours.**

This course highlights employee training and development as a mechanism to enhance organizational effectiveness and innovation. Using reflections, projects, readings, and group discussion, this course examines ways to transform a company's most valuable asset - the skills and talents of its people. This is a transformation that will build effective organizational culture to sustain high performance and promote individual growth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5115. Designing Talent Acquisition Systems. 3 Credit Hours.**

How do organizations acquire the talent to deliver on business strategy? This course focuses on building and implementing hiring systems that align with the strategy, competitive advantage, and culture of the organization, and that deliver measurable return on investment. How do we forecast supply and demand? What tools do we use for sourcing active job seekers as well as passive candidates who are not looking for opportunities? How are recruiting and assessment tools validated and what ethical and legal standards must be monitored? Through the course, students will become acquainted with the state-of-the-art practices in this key HR area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5116. Designing Strategic Reward Systems. 3 Credit Hours.**

How do organizations build reward systems to attract, engage, reward, and retain talent? This course exposes students to compensation systems and how they contribute to organizational success. Through readings, discussions, case studies, written assignments, and group projects, students will understand how to design systems that reflect current knowledge of motivation and trends in organizational design and strategy, addressing both financial and non-financial rewards.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5117. Leading within the Regulated Environment of HRM. 3 Credit Hours.**

What are the contemporary legal and public policy issues facing organizational leaders and HR partners? How can these business leaders remain compliant in this dynamic regulatory environment? How can they ensure that their decisions consider public policy implications? Students will focus on the issues and challenges associated with talent-related practices, such as employment opportunity, compensation, employee relations, job safety and health, and leave and benefits. Readings, videos, debates, and projects will expose them to public policy frameworks and the foundational legislation of these areas. Note: Prior to summer 2017, this course was titled "HR in a Dynamic Environment." Between Summer 2017 and Spring 2021, this course was titled "Public Policy and Compliance." Students will not receive credit for this course if they successfully completed it under the previous titles.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5118. Leading Business Transformation. 3 Credit Hours.**

Organizations transform, or they struggle. This course focuses on the transformation process - what motivates it, what it looks like, and how to lead it. Students will focus on key issues challenging businesses today to better understand the impacts on their organizations and the marketplace. They will evaluate the drivers for change, the risks and/or rewards of transformation, and the potential impacts to their workforce, culture, brand, policies and practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5119. Human Resource Consulting. 3 Credit Hours.**

This course focuses on building practical skills and knowledge that can be applied directly to Talent Management consulting opportunities. Students will learn how to deliver and measure consulting solutions that meet or exceed business goals. They will examine how and where Talent Management consultants add value to organizations in diverse industry sectors and participate in developing and managing TM consulting proposals and projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5121. Leading Strategically: Trends, Analytics, and Impact. 3 Credit Hours.**

Leaders who are able to think strategically are critical to business success. This course builds on foundational leadership concepts and explores a broad range of thought from strategic and organizational perspective with the goal of driving organizational results and supporting individual success. Students will take a focused, hands-on look at trending topics such as real-time feedback, personalized micro-learning, artificial intelligence, digital leadership, and generational leadership.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5122. Leading with a Diversity, Equity, and Inclusion Perspective. 3 Credit Hours.**

Leaders are continually being asked to develop initiatives within their organizations that drive revenue, enhance culture, improve service delivery, and increase employee engagement. They are being asked to lead these initiatives with a focus on diversity, equity, and inclusion or DEI. While these human resource "buzzwords" have led to noble efforts, the initiatives are often undertaken with a "check the box" or "avoid a lawsuit" perspective. Of course, compliance with organizational policies and avoiding lawsuits are not to be understated, but rarely do initiatives with this underlying charge drive desired organizational outcomes. This course is designed to go beyond compliance and review dynamics such as unconscious bias, privilege, and micro-aggressions that can keep organizations from attracting and retaining top talent. Course content includes global history and its influence on how and why isms exist, emotional intelligence (to serve as the model for providing clarity on the complex topic of DEI), how and why DEI programs succeed, and how to develop the leadership behavior of Cultural Humility. Come to class prepared to investigate your own identities, to increase your ability to regulate unproductive behaviors, to build empathy for your colleagues from all backgrounds, and to establish effective working relationships that will support your leadership competence and ultimately, organizational success!

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5131. Ethical and Socially Responsible Decision-making. 3 Credit Hours.**

What are the ethical and social responsibilities of business decision-making, policy formulation, and implementation? This course examines an organization's ethical and social responsibilities to various stakeholders, including owners, consumers, the community, and especially employees. Utilizing individual readings, written assignments, group discussion, and group projects, it provides students tools for critical thinking strategies and approaches that will help them raise questions and make decisions regarding appropriate ethical actions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5155. Leading Virtual Organizations. 3 Credit Hours.**

Virtual organizations are complex systems; Business leaders and HRM partners must be able to navigate that complexity. Virtual organizations can arise if the environment calls for greater supply flexibility or when the preferences of the workforce shift. They encompass the gig workforce and remote working arrangements - situations in which technology links individual effort. Topics will include the business need for virtual organizations, work system structuring, independent contractor relationships, and talent management and rewards. Students will explore the challenges of this form through readings, case studies, discussion boards, and presentations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5161. Human Resource Management in a Global Environment. 3 Credit Hours.**

Focuses on the role of culture in determining effective human resource management strategies. Addresses many of the problems and issues arising around the acquisition, development, organization and management of human resources on an international scale.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5170. Special Topics: Human Resource Management. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 5180. Special Topics: Human Resource Management. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 5182. Independent Study. 1 to 6 Credit Hour.**

Special study in a particular aspect of human resource administration under the direct supervision of an appropriate graduate faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 5190. Special Topics: Human Resource Management. 1 to 6 Credit Hour.**

Special Topics- Human Resource Administration

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 5411. Managing People. 3 Credit Hours.**

This course focuses on understanding the behavior of individuals and teams in relation to helping organizations and its members thrive. The concepts are linked to core managerial competencies and focus on leadership development and how effective leaders develop, motivate, and inspire organizational members to drive organizational success. Other subjects covered include the development of management thought, the role of the supervisor as a decision maker and the processes of planning, organizing, leading and controlling organizational activities. Ultimately, students will learn how to better create a vision of success, relate to others, and lead groups in which people engage and perform at their best.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5802. Leading and Managing Teams and Individuals. 3 Credit Hours.**

By exploring the interpersonal dynamics of individuals and groups, you'll hone your leadership skills and our ability to create cohesive teams with collective investment in reaching goals. You'll be better able in both traditional and virtual organizations to: manage conflict, dependency issues and difficult personalities; listen effectively and present yourself and your ideas to others; and manage virtual employees.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5804. Managing and Developing Human Capital in the Enterprise. 3 Credit Hours.**

In this course, you'll increase your ability to manage people and maintain a view of the human resource function as an integral part of a total enterprise in both traditional and virtual organizations. You'll address practical issues of human resource management, such as planning and executing staffing strategies, maintaining influence in the organization, managing the multicultural work force, managing programs for productivity improvement, and planning and managing the human side of organizational change.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 9001. Managing Human Resources. 3 Credit Hours.**

Current research on human resource management topics, including recruitment and selection, socialization, job planning, training and development, performance appraisal, job analysis, careers, labor-management relations, industrial conflict, and unionization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 9005. Seminar in Functional Human Resource Management. 3 Credit Hours.**

This is a PhD seminar course in functional/micro human resource management (HRM) that aims at providing you, as a doctoral student, with substantive knowledge and skills necessary to become a competent HRM researcher. The field of functional/micro HRM is vast and much broader than strategic/macro HRM. Given the size of the functional HRM literature, this course is not exhaustive; rather, it will introduce you to some key topics spanning recruitment, personnel selection, training and development, performance management and compensation, and employee withdrawal and turnover as well as exemplary recent research. An important challenge that you face as a doctoral student is developing your own "mental map" of this vast field. The role in this course is to provide a guided tour through the field of functional HRM so that you can begin to develop this map. That is, the major goal of this seminar is that you develop a broad familiarity with functional HRM research and theory, develop analytic skills necessary to critically evaluate and integrate work in this area, and apply pertinent HRM theory and concepts to your particular research interests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 9006. Doctoral Seminar in Meta-analysis and Research Synthesis Methods. 3 Credit Hours.**

Meta-analysis is aimed at the synthesis and generalization of primary research findings that seem to conflict with one another to draw simple yet significant conclusions. The essence of meta-analysis is that it is the research process of cumulating and synthesizing effect sizes (e.g., correlations) of a number of primary studies on the same topic by the application of research, measurement, and statistical techniques as normally addressed in a typical primary study (i.e., problem selection, hypothesis formulation, definition and measurement of constructs and variables, sampling, coding, and data-analysis).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HRM 9011. Pro-Seminar in Human Resource Management and Organization Behavior. 1 to 3 Credit Hour.**

Socializes students about the process of conducting and publishing research in HRM/OB. Includes guest speakers to discuss topics such as designing a research stream, conducting a project from start to finish, differences in journal quality and requirements to publish at different levels, presenting research well, the art of constructive peer review, and keys to effective academic writing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 9021. Current Readings in Human Resource Management and Organizational Behavior. 3 Credit Hours.**

This course examines emerging themes in the contemporary Human Resource Management and Organizational Behavior (HRM/OB) literature. Each week we will critically analyze articles that exemplify a current topical or methodological theme in the premier HRM/OB journals. The course will focus on articles that have been recently accepted or published within the current calendar year. The goal of this course is to gain a discussion-based seminar that will require significant class preparation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**HRM 9090. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**HRM 9183. Directed Study in Human Resource Administration. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Human Services (HS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**HS 8701. Introduction to Play Therapy. 3 Credit Hours.**

This course provides the theoretical basis for play therapy and is the first course in the Post Graduate Certificate in Play Therapy program. It offers an overview of the essential theories and principles of play therapy, and provides an arena for the direct comparison of the major theoretical models of play therapy and their implications for treatment. In addition, the course teaches the history of play therapy, as required by the Association of Play Therapy for registration as a play therapist. Students learn the role of the play therapist in a variety of settings, the stages of the play therapy relationship, the evolving research that guides play therapy interventions, the basic play therapy skills and the training/supervision guidelines. Foundational to this course is the belief that involvement of family in the treatment of children is imperative, however uniquely family is defined. An experiential component will focus on exposure to basic play therapy skills through observation of local professionals, instructors or videotaped experts performing play therapy. The course develops play therapy practice skills and an understanding of theoretical approaches of play therapy at the level required for eventual registration as a play therapist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HS 8805. Play Therapy Techniques. 3 Credit Hours.**

This course provides an understanding of the essential elements and principles of several primary techniques of conducting and evaluating play therapy including filial therapy, family play therapy and group play therapy. An experiential component will focus on play therapy techniques and skill development within the context of ethical and diversity sensitive practice. The content will contain materials to develop play therapy practice skills and an understanding of in depth approaches of play therapy at the level required for eventual registration as a play therapist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HS 8806. Play Therapy Applications for Special Populations. 3 Credit Hours.**

This course provides theoretical and applied skills for the treatment of special populations, including children who have been neglected, physically or sexually abused or otherwise traumatized, as well as children who are trying to cope with parental loss as a result of divorce, death or abandonment. Play Therapy with children who have special physical or developmental needs will also be explored, including children with medical problems, chronic or terminal illness, and/or challenging psychopathology such as autism. The content will contain materials to develop practice skills at the level required for eventual registration as a play therapist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HS 8807. Advanced Play Therapy Practice. 3 Credit Hours.**

This course further develops and synthesizes the subject matter in the previous three courses, to prepare students for the challenges of moving into practice. It provides an in-depth review of the advanced elements and principles of play therapy, including the ethical and legal issues of therapy with children and adolescents, attachment issues and disorders of children, children diagnosed with serious mental illness, children and resiliency, play therapy in schools, hospitals, and other host settings, sand tray therapy, and play therapy across the lifespan. The goal of this course is to further prepare play therapists for the special issues that are likely to be confronted in everyday practice, as well as expansion of skills for eventual work as a supervisor. The content will contain materials to develop advanced play therapy practice skills and an understanding of in depth approaches of play therapy at the level required for eventual registration as a play therapist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**HS 9001. Advanced Play Therapy Seminar. 3 Credit Hours.**

This is the final course within the graduate play therapy certificate program. It is an advanced seminar in Play Therapy theory and practice. The goal of this course is to increase each student's effectiveness with and knowledge of play therapy through intensive study of theoretical approaches to play therapy with an emphasis on the dimensions of the process (i.e., the student's understanding of children's behavior and their perceptions of self, the client and the therapeutic play relationship). Students have supervised opportunities to discuss and examine the value conflicts and ethical dilemmas that arise in the practice of play therapy with vulnerable populations. This course reviews the use of play therapy practice strategies, approaches, and collaborative interventions. Students will learn about different methods of practice assessment and evaluation and will be able to select appropriate forms of evaluation for use in their practice. Throughout the seminar, students will have exposure to and/or involvement in mock play therapy sessions, group supervision of a play therapy session, and supervision of play therapy sessions. This will provide students with opportunities to process the clinical experience of play therapy with emphasis on advanced skill development, assessment, treatment planning, intervention and evaluation of practice. In short, this seminar sets the stage for transition from the learning environment to professional practice as a play therapist. Students have the opportunity to practice skills in simulated settings; field settings may be available. Lecture, large group discussion, role playing, group supervision, video demonstration and participation on play therapy session labs are primary methods of instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Instructional Learning Technology (ILT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ILT 5232. Technology, Teaching, and Learning. 3 Credit Hours.**

This 3 semester-hour online/asynchronous graduate course focuses on how educational technologies may be strategically integrated to enhance both program administration and teaching and learning for adults in post-secondary settings. The ethical, social, and scientific ramifications of technological developments in education and how these developments affect the teaching and learning process are discussed. Application of instructional technologies in education, business, and industry presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**ILT 5287. ILT: Practicum in Instructional Technology. 3 Credit Hours.**

This 3 semester-hour graduate course provides for 100 hours of hands-on experience working in a professional organization consistent with the student's goals and objectives. The ethical, social, and scientific ramifications of technological developments in education and how these developments affect the teaching and learning process in the practicum settings are discussed. Application of instructional technologies in education, business and industry is discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ILT 5499. ILT: Instructional Technology and Learning. 3 Credit Hours.**

Introduces characteristics and applications of basic instructional and computer technology in the teaching-learning process. Students will gain hands-on experience in the use of computer and adaptive and/or augmentative hardware and software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ILT 5639. Instructional Design and Development. 3 Credit Hours.**

This 3 semester-hour graduate course is designed for the classroom teacher to explore pedagogically the strategies and techniques for creating and modifying instructional resources. Emphasis is on instructional design models for the systematic design of instruction, including adaptive and/or augmentative technology. Students employ a specific instructional design model and apply select instructional theories in the design of an instructional unit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Internal Medicine (INTM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**INTM M118. Intro to Rheumatology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**INTM M119. Introduction to Geriatric Medicine. 0 Credit Hours.**

With the increasing proportions of older adults worldwide, all graduating medical students will need to have a basic understanding and competencies in caring for older adult patients regardless of the medical specialties they end up choosing (except for pediatrics). Consequently, this elective will help students meet this need through exposure to basic geriatrics concepts/syndromes including ageism, polypharmacy, cognitive impairment, and malnutrition/failure to thrive.

**Repeatability:** This course may be repeated for additional credit.

**INTM M202. Introductory Elective. 0 Credit Hours.**

This generic first and second year Medicine elective serves as an introduction to a special topic in the Department of Internal Medicine. Topics vary from semester to semester and may include an extension of a content area already covered in the required curriculum, an introduction to a new topic or research issue, or exposure to a clinical discipline. First and second year electives are optional and do not impact graduation requirements. Electives are scheduled for seven two-hour sessions each, for a total of fourteen contact hours. Student interest and faculty availability determine topics offered each semester.

**INTM M203. Introduction to Integrative Medicine. 0 Credit Hours.**

The goal of this elective is to introduce the field of Integrative Medicine to early medical students. Integrative medicine is informed by scientific evidence and utilizes all appropriate therapies, both conventional and complementary, to treat patients with a coordinated, holistic, and patient-focused approach for health care and wellness. An Integrative Medicine elective is aligned with the LKSOM mission dedicated to patient-centered care, as the core principles of Integrative Medicine emphasize the therapeutic relationship between practitioner and patient.

**Repeatability:** This course may be repeated for additional credit.

**INTM M213. Introduction to Nephrology - A Journey through Kidney Disease. 0 Credit Hours.**

We will give students an overview of chronic kidney disease, including epidemiology, detection and management. Students will have the opportunity to participate in the American Society of Nephrology MAPS (Mentoring and Assessment Program) during this elective - a new program developed by this premiere nephrology professional organization to enhance early exposure to this subspecialty. This course is structured to provide didactic and hands-on exposure to chronic kidney disease evaluation and management. The educational experience will include opportunities to learn screening techniques in at-risk populations, talk with patients with kidney disease, end-stage renal disease and kidney transplantation, and visit an active dialysis unit under the supervision of nephrology faculty. Students will also have the opportunity to hear about some of the on-going kidney disease research within the Division.

**Repeatability:** This course may be repeated for additional credit.

**INTM M242. Mindfulness Meditation: Biological and Psychological Underpinnings. 0 Credit Hours.**

This elective will address the fundamentals of mindfulness meditation and instruct the student on how to begin and cultivate a practice of mindfulness of their own to reduce stress and attend more to the here-and-now moments of their lives. We will discuss the important contributions of Jon Kabat-Zinn, Tara Brach, Sharon Salzberg, Richard Davidson and Jack Kornfield, and review current studies endorsing the use of mindfulness meditation in the practice of medicine for pain, anxiety and many other pathologies.

**INTM M246. Early Clinical Reflections: Literature and Writing about Patient Encounters. 0 Credit Hours.**

This elective will address issues raised by initiation into the realm of clinical medicine. In learning to take medical histories and perform physical examinations, medical students gain access to privileged and detailed information about the lives and bodies of patients. The elective will provide a format for discussing reactions to this process. Readings will include essays about, and fictional descriptions of, clinical encounters by Oliver Sacks, John Stone, Richard Selzer, William Carlos Williams, and others. Participants will write three brief pieces in either fictional or essay form.

**INTM M285. Intro to Palliative Care. 0 Credit Hours.**

As early as the third year of medical school, students are faced with medical and ethical issues surrounding end-of-life care. Too often, this is without solid introduction to palliative care medicine and personal reflection on what a "good death" entails. This elective will provide information about end-of-life care through lectures, readings, and shadowing opportunities, and will also allow time for student reflection through journaling and small group discussion. It will be a foundation for medical students to begin a career-long endeavor to provide compassionate, appropriate, multidisciplinary care to dying patients and those suffering through chronic illness.

**Repeatability:** This course may not be repeated for additional credits.

**INTM M300. Medicine Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**INTM M301. Medicine. 0 Credit Hours.**

**Course Attributes:** M6

**Repeatability:** This course may not be repeated for additional credits.

**INTM M305. Career Exploration of Geriatric Medicine. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M312. Career Exploration of Hematology/Oncology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M313. 3rd Year 2 Week Away Healthcare Elective. 0 Credit Hours.**

Students may receive credit for a 2-week away experience in healthcare. This can include a clinical or non-clinical experience. The student must be supervised and evaluated by a person with a position in the organization where the experience is taking place. The experience must be arranged by the student and approved by the Associate Dean for Clinical Education.

**Repeatability:** This course may be repeated for additional credit.

**INTM M319. Career Exploration of Palliative Care. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M321. Career Exploration of Infectious Diseases. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M333. Career Exploration of Medical Toxicology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M357. Career Exploration of Inpatient Pulmonary Medicine. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M364. Career Exploration of Nephrology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M374. Career Exploration of Cardiology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M375. Career Exploration of Rheumatology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M380. Career Exploration of Endocrinology/Metabolism. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M381. Medical Subspecialties. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**INTM M390. Career Exploration of Gastroenterology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**INTM M391. Principles of Urology. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**INTM M419. Palliative Care/Hospice. 0 Credit Hours.****Course Attributes:** M2**Repeatability:** This course may not be repeated for additional credits.**INTM M430. Pulmonary/Sleep Medicine. 0 Credit Hours.**

This rotation is a 4 week course comprised of two weeks of pulmonary medicine and two weeks of sleep medicine which will cover commonly encountered sleep problems. We will review both the physiology of normal sleep and pathophysiology associated with sleep apnea, hypoventilation syndromes and insomnia.

**Repeatability:** This course may be repeated for additional credit.**INTM M449. HIV Care and Prevention in Populations at Risk. 0 Credit Hours.**

This will be a four week elective, spent on site at Episcopal hospital primarily with a physician, and occasionally a nurse practitioner. There will hopefully be occasional opportunities to visit Graterford Prison in person to see patients if security clearance can be arranged. The student will participate in both clinical sessions with patients in the office (HIV infected, or at risk for HIV) and via telemedicine in the Pennsylvania Department of Corrections (DOC), as our HIV/DOC program care for approximately 650 incarcerated HIV patients at any given time. They will have the opportunity to interact with patients both in the outpatient setting and in the prison setting, in conversations regarding their health care, mental health, nutritional status, treatment choices, living conditions, and comorbidities. For those patients who are incarcerated, the students will learn how prison both presents opportunities and barriers to care, and how transitions to freedom may jeopardize that health. Transgender patients are seen both as outpatients and in the DOC. Our program manages their hormonal therapy, as few DOC physicians feel comfortable doing so. The student will be able to witness the degrees of sensitivity given to this population in the prison system, and the health care needs that are often overlooked in transgender people. One of the goals of our outpatient program is to provide culturally competent and friendly care to the LGBTQ community. Our practice is open to all, and we have a number of HIV negative patients as well. Many of our patients do identify as at risk for HIV, and are on tenofovir/emtricitabine (Truvada) for PrEP. This is also routinely discussed with our HIV-infected patients, as well as our prisoners prior to release, if they have partners who might be interested. There will also be opportunity to interact with other members of our multidisciplinary HIV team, including HIV specialty pharmacists, case managers, and care coordinators. We will attend a weekly HIV didactic conference run jointly with the Infectious Disease division.

**INTM M450. Allergy/Immunology. 0 Credit Hours.****Course Attributes:** M2**Repeatability:** This course may not be repeated for additional credits.**INTM M463. Ambulatory Medicine. 0 Credit Hours.****Course Attributes:** M2**INTM M464. Rural Medicine. 0 Credit Hours.****Course Attributes:** M2**Repeatability:** This course may not be repeated for additional credits.**INTM M466. General Internal Med/Inpatient. 0 Credit Hours.****Course Attributes:** M2**INTM M467. Medicine Nicaragua. 0 Credit Hours.****Course Attributes:** M2**Repeatability:** This course may not be repeated for additional credits.**INTM M470. Cardiology. 0 Credit Hours.****Course Attributes:** M2**INTM M471. Clinical Cardiac Electrophysiology. 0 Credit Hours.**

This course will focus on the diagnostic and therapeutic procedural elements of Cardiac Electrophysiology. Students rotating in Clinical Cardiac Electrophysiology will gain exposure to device implant procedures (e.g. pacemakers, defibrillators, CRT, subcutaneous ICD, leadless pacemakers, cardiac contractility modification devices), device extraction (using laser and mechanical instruments), and ablation (e.g. SVT, VT, atrial fibrillation, atrial flutter). Students will also learn about anatomical and electrophysiologic mapping technology that facilitates EP procedures. Students will participate in Cardiac EP academic and clinical rounds, ECG teaching with the Cardiology fellows, and provided reading on arrhythmia mechanisms and treatments.

**Repeatability:** This course may be repeated for additional credit.

**INTM M475. Right Heart Failure and Pulmonary Hypertension. 0 Credit Hours.**

The Right Heart Failure and Pulmonary Hypertension Elective is a 4th year elective that gives students an in-depth clinical exposure to the history, physical exam, diagnostic evaluation, and workup of patients with all forms of right heart failure, including those with pulmonary hypertension and chronic thromboembolic disease. There will be emphasis on the heart failure physical exam, interpretation of laboratory assessment, ECG, echocardiograms, CT Chest (with and without angiography), V/Q scan with SPECT imaging, pulmonary angiography, pelvic venography, invasive hemodynamic assessment under rest and exercise conditions including with gas exchange assessment with cardiopulmonary exercise testing (CPET).

**Repeatability:** This course may not be repeated for additional credits.

**INTM M476. Cardia Critical Care-CCU. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M480. Endocrinology/Metabolism. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M486. HIV Outpatient Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M487. Women's Health. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M490. Gastroenterology. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M505. Geriatric Medicine. 0 Credit Hours.**

The course aims to expose learners to basic geriatric principles and prepares future physicians to care for older adults in their practice, regardless of what specialty they may go into. Learners can choose to take the elective for 2 weeks or 4 weeks, depending on their preference/schedule. Course contents are extrapolated from this validated study with corresponding pocket card (<https://agsjournals.onlinelibrary.wiley.com/doi/full/10.1111/jgs.16226>).

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M510. Hematology/Oncology. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M520. Infectious Diseases. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M521. Transplant Infectious Diseases. 0 Credit Hours.**

The Transplant Infectious Diseases Elective is a 4th year elective that gives students exposure to both the treatment and prevention of infection in solid organ transplant recipients and candidates. Students will be part of a one fellow/one attending team caring for patients preparing for transplant or post-transplant. They will participate in the care of immunosuppressed inpatients in a consultative manner. Students will experience a diversity of solid organ transplant issues, ranging from nosocomial infections to opportunistic infections and from pre-transplant evaluation to end-of-life. They will participate in the student lecture series of the General Infectious Diseases elective as well.

**Repeatability:** This course may be repeated for additional credit.

**INTM M529. Advanced Lung Disease. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M530. Medical ICU (MICU) - Critical Care. 0 Credit Hours.**

The required critical care course will introduce students to the management of critically ill patients. Students are expected to follow their patients' progress and contribute to their care with supervision. Students will observe and assist as possible in procedures being performed in the ICU. Students will obtain exposure to assisted ventilation, palliative and end-of-life care.

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in INTM M301, OBGY M320, PEDI M330, PSYM M340, SURG M350, NEUR M370, and FAMP M360.

**INTM M531. MICU/SICU. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M536. Ventilator Rehab. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M540. Medical Oncology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**INTM M543. General Internal Medicine Ambulatory Elective. 0 Credit Hours.**

The General Internal Medicine Ambulatory Elective is a 4th year elective that exposes students to outpatient primary care. Students will work directly alongside faculty members and will be involved in all aspects of patient care, including taking a history and physical, behavioral change counseling, following up results, and inter-visit patient communication. There will be an emphasis on chronic disease management, preventive care, and the impact of social determinants of health on patient care. Students will receive individualized coaching to improve their clinical skills. Students will also participate in a didactic series with the internal medicine residents and lead a case-based, evidence-based medicine session on a clinical topic.

**Repeatability:** This course may be repeated for additional credit.

**INTM M550. Ambulatory Pulmonary Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M551. Lung Transplant. 0 Credit Hours.**

The Lung Transplant Elective is a 4th year elective that gives students exposure to the care of Lung Transplant patients. They will be a part of a multidisciplinary team caring for patients preparing for transplant or post-transplant. They will participate in the care of patients in the hospital and in clinic.

**Repeatability:** This course may be repeated for additional credit.

**INTM M557. Inpatient Pulmonary Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M560. Nephrology. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M566. Addiction Medicine. 0 Credit Hours.**

The Addiction Medicine Elective is a 3rd and 4th year elective designed to provide medical students with exposure to the care of patients with opioid use disorder and the principles of harm reduction. Students will be paired with faculty caring for patients on the inpatient addiction medicine consult service, as well as Temple's outpatient medication assisted treatment clinic. Students will gain exposure to patients experiencing opioid withdrawal and uncontrolled pain in the acute care setting, as well those engaged in outpatient buprenorphine maintenance care. The importance of transitional care will be highlighted, with an emphasis on hospital discharge and warm handoff to community care providers. Particular attention will be paid to the unique socioeconomic challenges experienced by patients with drug dependence.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Medical, Fourth Year Medical.

**Repeatability:** This course may be repeated for additional credit.

**INTM M570. Rheumatology. 0 Credit Hours.**

**Course Attributes:** M2

**INTM M581. Medical Subspecialties. 0 Credit Hours.**

A 4-week clinical rotation comprising two 2-week experiences in approved internal medicine subspecialties.

**INTM M850. Medicine Subinternship. 0 Credit Hours.**

**Course Attributes:** M1

## International Business Administration (IB)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**IB 5501. IB Theory & Practice. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5001, ECON 5001, STAT 5001, MKTG 5001, MIS 5001, FIN 5001, and MSOM 5001)

**IB 5502. International Marketing. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001, (MKTG 5401 and MKTG 5402), or (MKTG 5301 and MKTG 5302))

**IB 5503. Disruption and Strategic Responses. 3 Credit Hours.**

This course is designed to present the break-through concepts and frameworks to respond to disruptions and uncertainty in a global business context. It combines multiple attributes and analytical frameworks to investigate the most appropriate strategic response(s) while avoiding biases and pitfalls that often cause strategies to fail. This course focuses on challenges and opportunities in crafting and executing strategies amid changes that occur at all levels (e.g., country, industry, corporate, and individual). It contains theoretical and experiential elements to strategically respond to (geo)political, economic, technological, environmental, and legal disruptions. These strategies allow companies and their managers to create value by establishing and maintaining a sustainable competitive advantage. Note: Whereas there are no prerequisites for this course, students without any experience and/or coursework in marketing or strategy should consult the faculty for guidance and possible additional preparation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**IB 5511. International Management. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5001, ECON 5001, STAT 5001, MKTG 5001, MIS 5001, FIN 5001, and MSOM 5001)

**IB 5535. Intl Financial Markets. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**IB 5536. Intl Corporate Finance. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (FIN 5001, (FIN 5401 and FIN 5402), or (FIN 5301 and FIN 5302))

**IB 5570. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**IB 5580. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**IB 5582. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**IB 5590. Special Topics: Intl Bus. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**IB 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**IB 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**IB 9001. Theory-Int Bus & Mltinat. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**IB 9002. Empirical Research in International Business. 3 Credit Hours.**

The course is designed to provide an introduction to issues relevant to international business/cross-national/cross-cultural research. We will investigate basic elements of research theory, constructs, measures, data collection and analysis, and other elements of international business research. While the underlying objective of this course is to familiarize you with basic tools in IB research, a higher-level goal is to provide hands-on experience of conducting high quality original research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**IB 9090. Spec Topic Intl Bus. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**IB 9183. Directed Study in International Business. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

## International Teaching Assistants (ITA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ITA 5221. Eng for Foreign Students. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



## Journalism (JRN)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **JRN 5004. Computer-Assisted Reporting and Research. 4 Credit Hours.**

Computer-based exploration of the Internet, World Wide Web, databases and on-line libraries to develop information gathering and presentation skills. Research approaches and data analysis emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **JRN 5005. Communication Law. 3 Credit Hours.**

Legal and philosophical study of government regulation of information transmission from 15th century to the present. Emphasis on legal descriptive research methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in 20 credits in courses numbered 5000 to 9999.

### **JRN 5102. International Reporting. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5002.

### **JRN 5121. Magazine Writing. 3 Credit Hours.**

Intended for graduate students who want to write non-fiction for a variety of publications and outlets. It will examine the styles of various writers and publications; development of ideas into saleable magazine articles for major periodical publications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5002.

### **JRN 5151. Literary Writing in Journalism. 3 Credit Hours.**

This graduate-level course will examine the 50-year trend, begun by the New Journalism of the 1960s, which uses the storytelling techniques of fiction and the documentation of journalism to create works of powerfully-told emotional truth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5002.

### **JRN 5201. The American Magazine. 4 Credit Hours.**

Analysis of content, editorial policy and trends in American magazine journalism; discussion of publishing procedures; marketing, circulation, and advertising problems; reader research. Class project: create prototype issue of magazine, with prospectus, advertising, and promotional materials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5001.

### **JRN 5211. Media Management. 4 Credit Hours.**

Comparison of the organizational structures of news media; editorial content, advertising, circulation, and business aspects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5001.

**JRN 5212. The Entrepreneurial Journalist. 3 Credit Hours.**

With traditional news organizations in crisis, there have never been more opportunities for journalists to become entrepreneurs. This course will explore the future of news, from individual bloggers to digital startups, and how journalists can help shape this future.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5213. Solutions Journalism. 3 Credit Hours.**

This course introduces students to the practice of solutions-oriented reporting, an outcome-focused form of journalism, and assesses its impact on communities and issues. Students will develop reporting projects on specific solutions-based themes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5221. Journalism and Mass Communication History. 3 Credit Hours.**

Study of the technological and social development of communication systems from ancient to present times with emphasis on historical/descriptive research methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5001.

**JRN 5251. Mass Communication Research Methods. 4 Credit Hours.**

This course offers a study of the methods for researching journalism and mass communication, including quantitative and qualitative approaches.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5252. Models of Journalism Around the World. 3 Credit Hours.**

This course introduces students to current issues, debates, and practices relating to the dissemination of news in a global context. We will first examine and discuss the key theoretical concepts associated with the creation, distribution, and reception of news in an increasingly global environment, as well as the broader debates surrounding issues of transnational influence. In the second half of the semester, we will take a closer look at the current nature and organization of media systems in various parts of the world through a number of case studies. By the end of the semester students will be familiar with the global context in which news is produced and distributed, and demonstrate a critical understanding of the challenges and concerns facing both American journalists covering international issues and foreign journalists operating in different media environments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5001.

**JRN 5301. Introduction to Urban Journalism. 3 Credit Hours.**

This course is a bootcamp designed to ensure all incoming students have the skills necessary to dive into the Urban Reporting Lab in the fall semester. It covers (1) News literacy: how consume news, and why. What is a news story? How does it get produced? What should it accomplish? (2) Storytelling tools: an overview of the mediums and technologies involved in multimedia storytelling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5302. Urban Reporting Lab 1. 3 Credit Hours.**

This is a coached, multimedia news production class in which students cover urban issues, publishing their work on the lab's news site and developing areas of individual expertise. This work is continued in JRN 5305, Urban Reporting Lab 2.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5303. Journalism Concepts. 3 Credit Hours.**

This weekly seminar gives students an overview of the norms and philosophies that guide journalistic practice, with a particular emphasis on journalism's role in the social, cultural, political and historical fabric of the city. Students will learn about the professional concepts that will guide their work as journalists while also understanding how those concepts have developed over time and contribute to journalism's role in society.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5304. Editing the News. 3 Credit Hours.**

Accelerated, in-depth instruction in AP style, copy editing, legal problems of the editor, editorial judgment, accuracy, fairness, clarity, balance in copy, headline writing, fundamentals of page makeup and design, use of photography, tables, graphs, charts and maps.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5305. Urban Reporting Lab 2. 3 Credit Hours.**

This course is a continuation of Urban Reporting Lab 1. Students work together to tackle a single, urban problem, issue, or topic that the class chooses together, producing a regular stream of news to be published on a collectively owned, multimedia, data-centric class website. Students may hone a chosen specialization through this course by having a particular role in the class project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in JRN 5302.

**JRN 5306. Journalism and the Public Interest. 3 Credit Hours.**

This course prepares students to work in an ethical way as responsible members of their profession and their communities. It covers the ethical aspects of technological and economic change, the main legal issues that journalists face, the challenges of reporting on powerful institutions, and journalists' obligations to their subjects and audiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5307. Capstone Reporting Experience. 3 Credit Hours.**

In this class, students do their own independent reporting projects, within an area of specialization if appropriate. The goal is to produce a journalistic masterwork (analogous to a thesis) that will lead to professional publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5308. Multiplatform Journalism. 3 Credit Hours.**

This course focuses on the technical skills needed to produce news reports in multiple media. These skills include photography and photo editing; videography and video editing; and audio recording and editing. Students will become proficient with the necessary equipment and the Adobe Creative Cloud software. This course is a companion to JRN 5302 Urban Reporting Lab 1, which provides foundational reporting and writing skills that students will be expected to employ in this course. The technical skills taught in this course enable students to pursue multimedia journalism across the MJ curriculum.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**JRN 5601. Temple Journalism Review. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (JRN 5012 and JRN 5013)

**JRN 5602. Documentary Journalism. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (JRN 5012 and JRN 5013)

**JRN 5700. Seminars in Communication. 4 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5710. Seminars in Communication. 4 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5720. Seminars in Communication. 4 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5730. Seminars in Communication. 3 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5740. Seminars in Communication. 4 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5750. Seminars in Communication. 4 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5760. Seminars in Communication. 4 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5770. Seminars in Communication. 3 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5780. Seminars in Communication. 4 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5790. Seminars in Communication. 3 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5800. Seminars in Communication. 3 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5810. Seminars in Communication. 2 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5820. Seminars in Communication. 2 Credit Hours.**

Special-topic courses in a broad range of communication areas including print and broadcast news, magazines, and new technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5890. Seminars in Communication Abroad. 6 Credit Hours.**

Subject matter and location vary each semester. Please consult the Course Schedule for further information.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5982. Directed Projects. 1 to 8 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5983. Directed Readings Comm. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 5986. Internship. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**JRN 9995. Master's Research Project. 3 Credit Hours.**

Students complete independent reporting projects within an area of specialization if appropriate. A faculty advisor will oversee weekly meetings among all students to discuss common issues and progress. The goal is to produce a journalistic masterwork (analogous to a thesis) that will be pitched to a professional news organization, creating the foundation for a portfolio of published work. The course is meant as a center for advising and feedback from instructor and peers. While students work independently on a master's project, this course serves as a home base for addressing common questions, concerns and challenges. Students will regularly report progress updates and receive feedback and guidance from the class. The instructor ensures that all students complete the projects in a timely fashion. The master's research project may take many forms. Students should choose a project in consultation with the program director, the instructor of this course, and other advisors as appropriate. Projects must be approved by the program director before beginning work. The master's project may be accomplished using one of the following venues: a longform or otherwise in-depth reporting project; an internship; a study away; an assistantship with Philadelphia Neighborhoods; or a collaboration on a substantial project with third parties, including but not limited to Open Data Philly, Solutions Journalism Network, Philadelphia Media Network, etc. In any case, the goal of the master's research project is to produce a publishable journalistic masterwork. The instructor of this course will work with students choosing study or other work that keeps them away from in-person class meetings to ensure that these students may still participate in giving project updates and providing feedback to peers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Juridical Science (JUSI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**JUSI D899. Dissertation Research. 1 to 9 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Juris Doctor (JUDO)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**JUDO 0000. Law Abroad-Cork. 6 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0001. Law Abroad-Tel Aviv. 6 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0002. Law Abroad-Athens. 6 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0003. Law Abroad-Rome. 6 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0004. Law Abroad-Japan. 18 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0005. FLLM Dual Degree. 0 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**JUDO 0400. Administrative Law. 3 Credit Hours.**

A study of the process of lawmaking and law application by the executive departments and agencies of government and their control by the legislature and the courts. The primary emphasis is on the frequently competing goals of effective government, administrative discretion and fairness to affected parties. A part of the course is designed to give students insights into the allocation of law and policy making among executive, legislative and judicial branches. Another part focuses on administrative procedure and the various constitutional, statutory and common law underpinnings of such procedures.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0401. Litigation Basics. 1 Credit Hour.**

A basic overview of the judicial system and the mechanics of litigation. This course familiarizes students with the anatomy of a lawsuit and the basic procedural concepts that frame many of the cases used in the first year curriculum.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0402. Civil Procedure I. 2 to 4 Credit Hours.**

Civil Procedure I covers the jurisprudence and rules governing the process of civil litigation in the United States. The law of civil procedure finds its basis in a framework of rules, but Civil Procedure I focuses on the doctrine relating to the Federal Rules of Civil Procedure rather than on the rules themselves. (The rules are covered in detail in Civil Procedure II). As a result, students will learn this area of jurisprudence largely by reading and analyzing cases that interpret these rules, and will also examine some of the rules as well as relevant provisions of federal statutes and the U.S. Constitution. The course covers topics which may include: commencement of an action, pleading, pre-trial techniques of discovery, the trial, judgments and jurisdiction, res judicata, collateral estoppel, bar and merger and other collateral attacks are considered in a federal setting with appropriate emphasis on historical antecedents.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0403. Law Day Division. 15 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0404. Constitutional Law. 4 Credit Hours.**

Judicial review of legislative and executive actions in a constitutional setting, the relationship of the states to the federal government (Federalism), the relationship of the people to government (Bill of Rights) and the powers of the Congress are considered.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0405. Law PTD Reg Division. 11 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0406. Contracts. 4 Credit Hours.**

Topics may include: the bargain, fairness, equality of the bargain and formalisms such as parole evidence and Statute of Frauds are examined in the context of the common law and Article 2 of the Uniform Commercial Code. Further utilizing the Uniform Commercial Code, the common law and other statutory bases, impossibility, change, condition, anticipatory breach, good faith duty to act, judicial remedies, controlling risk and remedy, third party beneficiaries and assignment are examined.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0407. Law Eve Reg Division. 11 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0408. Contracts II. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0409. Law Eve Ext Division. 10 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0410. Criminal Law I. 3 Credit Hours.**

The elements of major crimes, their policy and historical underpinnings and the alternatives for designating and dealing with major antisocial behaviors are considered. Some introduction to criminal procedure is provided.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0411. Law PTD Ext Division. 10 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0412. Transfer Credit. 1 to 29 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0413. JD/MBA. 1 to 12 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0414. Legal Research & Writing. 2 to 3 Credit Hours.**

Legal research, writing and advocacy methods are explored. Students are assigned to small groups for individualized instruction. After introduction to basic research techniques, problems are assigned and various methods are utilized to help students develop their writing and analytical skills. The objective of the program is to develop basic legal skills in an informal seminar atmosphere that allows maximum contact with the assigned instructor. NOTE: Legal Research and Writing must be successfully completed (grade of D or better) [a] in order to graduate and [b] prior to taking any writing course.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0415. Adv Legal Research/Writing. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0416. Professional Responsibility. 2 to 3 Credit Hours.**

The purpose of this course is to explore what it means to be an ethical lawyer by discussing a range of issues facing legal professionals while acquainting students with some of the specific guidelines for ethical professional conduct. Emphasis is on the Model Rules of Professional Conduct, ethics opinions from bar associations, common law and statutory materials. Successful completion (grade of C or better) of Professional Responsibility, either as an exam course, a writing seminar, or a part of ITP, is required in order to graduate.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of D in (JUDO 0404 and JUDO 0410)

**JUDO 0417. Advanced Contracts: UCC and Interpretation. 3 Credit Hours.**

This course focuses on sophisticated commercial problems and cases, usually based on Article 2 (the Sales article) of the Uniform Commercial Code and occasionally on the Convention on the International Sales of Goods. A primary emphasis is on methods for interpreting contract provisions and the underlying statutory provisions, usually during the performance phase of contracts. The problems confronted in the course are somewhat broader than those arising in the Sales course. In addition, they often arise in transactional and counseling settings and the material lends itself to considering the role of lawyers in these situations, as distinguished from their roles as litigators. Both this and the Sales course are the easiest transition from the Contracts course in first year. Article 2 of the UCC is a subject covered by the bar exam.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0418. Property. 4 Credit Hours.**

The basic relationships in systems of ownership of personalty and realty, and the devices for transferring ownership are considered. Private and public planning, regulation of land use, the estate system and the new property theories are also examined.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0419. Philosophy of Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0420. Torts. 4 Credit Hours.**

The legal protection afforded in civil proceedings against interference by others with the one's person, property and intangible interests is considered. The historical and theoretical bases of the principal theories of tort liability are examined to develop an understanding of current law and a sensitivity to changing patterns of tort responsibility emerging from a dynamic society.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0421. Spanish for Lawyers. 2 Credit Hours.**

The purpose of this course is to give the Spanish speaking lawyer or law student a brief introduction to, and the ability to increase their familiarity with, legal terms in Spanish. Students will be exposed to these terms in the context of the substantive civil law in which they are utilized. This course will be conducted in the following manner. A legal document, brief article or other reading will be posted on Blackboard one week prior to our meeting. These legal documents or articles will focus on different areas of the law as practiced in Latin America. Students will be expected to read and review each weekly document prior to our meeting, where we will discuss the assignment in Spanish. This course will be graded on a Pass/Fail basis. The evaluation will be based on two to three writing assignments, which will involve either the drafting of a legal document in Spanish or the translation of a document in Spanish into English. NOTE: Students must be able to speak and read Spanish as class meetings will be conducted exclusively in Spanish.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0422. Legal Decision Making. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0423. Intl/Comprtv Family Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0424. Crim Pro: Euro-Japan-US. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0425. Supreme Ct/Current Term. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0426. Sexual Orientation & Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0427. Comnty Economic Devlpmnt. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0428. Pennsylvania Civil Procedure. 2 Credit Hours.**

This course will provide students with a firm foundation in the procedures followed in the litigation of civil disputes in Pennsylvania state courts. The significant differences between the Pennsylvania and the Federal Rules of Civil Procedure will be examined. The final grade will be based on a series of written exercises and a final exam.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0429. Sexual Orientation, Gender Identity and the Law. 2 Credit Hours.**

This course will explore the relationship between the ways in which American law has responded to a variety of issues related to sexual orientation. The course will begin by examining the multiple meanings and dimensions of sexual orientation, then look at the relationships between issues of orientation and other legally protected statutes. The remainder of the course will focus on a variety of substantive areas of law in which issues of sexual orientation arise. As each substantive area is covered, students will be encouraged to reflect back on the first classes and think about whether existing legal protections for other minority groups are appropriate for sexual minorities, or whether other legal structures would be more effective in achieving the goals of equality and liberation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0430. Water Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0431. Collective Bargaining. 2 Credit Hours.**

This course examines collective bargaining: the duty to bargain in good faith and enter into and enforce collective bargaining agreements through the courts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0432. Mass Tort Litigation. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0433. Cyberspace. 2 to 3 Credit Hours.**

The goal of this course is to introduce students, by means of a series of specific case studies chosen to illustrate the clash between existing legal regimes and new technologies, to a reasonably comprehensive subset of the legal problems that are being addressed as part of the developing "online law." Topics to be covered include the law of copyright as applied to electronic information, trademark law as applied to Internet "domain names," application of the First Amendment to the regulation of Internet communications, privacy concerns on the Internet, the law of anonymous communication and the regulation of encryption technology, and the difficult international jurisdictional questions presented by Internet activity.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0434. Constnl Lmts Reg Commrce. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0435. Human Rights/Euro Union. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0436. Law of Investigations. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0437. Introduction to Transactional Skills. 1 to 2 Credit Hour.**

This course exposes students to transactional lawyering through a mix of substantive lectures and small-class skill workshops organized around founding a small business. Topics include: choosing a business form; client interviewing; negotiation; drafting letters, contracts, leases, and other agreements.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0438. Introduction to Business Organizations. 3 Credit Hours.**

Businesses of any complexity require that someone exercise responsibility on behalf of another person or on behalf of the entity itself. Ensuring the responsible exercise of that authority will be a primary focus of this course. Through a study of non-corporate forms of doing business, including sole proprietorships, partnerships and limited liability companies (LLCs), the course will focus on concepts of agency and fiduciary duty which are the foundation for understanding when and how a person or entity acts on behalf of another. Throughout the course, students will consult the statutory provisions governing various business entities and consider how to contract around the those statutes when the organizers of a business desire to alter the basic statutory scheme.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0439. Business Law Basics. 1 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0440. Unincorporated Business Organizations: Agency, Partnerships and LLC's. 3 Credit Hours.**

Most business organizations in the United States are no longer corporations, but unincorporated business associations such as sole proprietorships, partnerships, or limited liability companies (LLCs). These business forms are used by entities ranging from "mom and pop" stores to high-tech start-ups to sophisticated investment funds. This class examines these business entities, which every attorney engaged in a business practice needs to understand. After a review of agency law, the course will examine partnerships, limited partnerships (LPs), LLCs, and if time permits some less common unincorporated business forms.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0441. Adv Con Law: Con Theory. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0442. Violence Against Women. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0443. Intro Asian Legal System. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0444. National Security Law. 2 to 3 Credit Hours.**

This course will study national security threats - those posed to the United States by state and non-state actors who target US civilians, personnel and interests with the aim of achieving political change - and examine the legal controversies raised in responding to these threats domestically and abroad. The course will be divided into two parts. Part One will examine legal controversies in constitutional law. This includes the scope of presidential powers in times of heightened national security threats and the separation of powers more broadly. We will also explore the tension between national security and individual liberties during times of crisis. Part Two will examine the legal controversies raised by irregular combat between the US and non-state actors internationally. We will study some of the most important and controversial legal issues triggered by the so-called 'war on terror.'

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0445. Family Law: Custody. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0446. Social Science in Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0447. Intellectual Property Licensing Law. 2 to 3 Credit Hours.**

This course examines the law of intellectual property licensing, explores the rationale for licensing, and analyzes IP license agreements and common provisions for licensing. IP License Agreements are unique in many legal and business ways and are important to all aspects of the business world today. The course will involve drafting licenses for different intellectual property rights.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO 0448. Business Acquisitions. 1 to 2 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0449. Lawyering for Organizations. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0450. Environmntl Lit/Superfund. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0451. Business Mergers and Acquisitions. 2 Credit Hours.**

The course will prepare students seeking employment as business lawyers by exploring fundamental legal issues arising in mergers and acquisitions. It will include a review of basic state code provisions relating to mergers and acquisitions using provisions of the Delaware General Corporation Law ("DGCL"). The course will examine provisions of the DGCL authorizing mergers and acquisitions, evaluate instances when stockholder approval is required and assess issues arising in different deal structures and the various consequences of each, including tax issues relating to asset and stock deals and successor liability issues. Once students have a solid understanding of how deals are consummated under state law and the structural issues associated with various deal forms, the class will scrutinize certain drafting and negotiating issues arising in preliminary and final acquisition agreements and will analyze basic closing documents and study the role of business lawyers in acquisition transactions. The course also will cover fiduciary duties of board members relating to acquisitions including a board's power to thwart unwanted takeover attempts as well as a response to competing bidders.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0452. AIDS & the Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0453. Law of the European Union. 2 to 3 Credit Hours.**

This course provides an introduction to the law and institutions of the European Union. Topics to be considered include, inter alia, the major treaties and institutions of the Union, the concept of the Common Market and the Four Freedoms, the sphere of Union law and policy, judicial review of Union acts, the reception of Union law in the member states and the relationship between the Union and its members.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0454. Commercial Finance Trans. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0455. Economics of Divorce. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0456. Adv Evidence: Scientific. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0457. Business Torts. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0458. Dignitary Harms. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0459. International Commercial Mediation and Arbitration. 2 Credit Hours.**

This course focuses on the law and practice of international commercial arbitration, including the creation and operation of international arbitration tribunals as well as the role of nations in compelling, facilitating, and enforcing arbitral awards. Special attention will be given to issues involving jurisdiction, choice of law, arbitration clauses in international transactions, presentation of cases before arbitral tribunals, cases on arbitrations and the relationship between international arbitration and court systems.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0460. Trial Advocacy I. 2 Credit Hours.**

Trial Advocacy I is part of the Integrated Trial Advocacy Program (ITAP), a two semester, ten credit course package. ITAP combines Evidence, Civil Procedure II and trial advocacy skills. Taken in the fall along with Evidence and coupled with the spring courses of Civil Procedure II and Trial Advocacy II, Trial Ad I introduces the student to the basic skills of analyzing a trial file, examining witnesses, making and meeting objections and offers of proof, introducing exhibits, and delivering opening statements and closing arguments through a "learning by doing" or student performance format. Trial Ad I has a decidedly criminal trial advocacy orientation. The course culminates with students trying a mock criminal jury trial. Particular attention is given to the interplay between the law of evidence and the art of trial advocacy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: L2LAWF, L3LAWP.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0461. Trial Advocacy II. 3 Credit Hours.**

Trial Advocacy II is part of the Integrated Trial Advocacy Program (ITP), a two semester, ten credit course package. See the description for Trial Advocacy I (Law 460) for further information. Taken in the spring along with Civil Procedure II, this course builds on the skills developed in Trial Advocacy I with particular attention paid to witness impeachment, the examination of expert witnesses, and the integration of a case theory into each aspect of trial performance. Trial Ad II has a decidedly civil trial advocacy orientation. Students will conduct depositions, argue motions and try a minimum of two mock civil lawsuits.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0460, JUDO 0517 (may be taken concurrently), and JUDO 0540)

**JUDO 0462. Transactional Practice I. 2 Credit Hours.**

This course is part of an innovative course package entitled "Integrated Transactional Practice" which combines Trusts and Estates, Professional Responsibility and transactional skills, such as interviewing, negotiation, counseling and drafting into a two-semester, ten-credit sequence. The course centers around six realistic client files which involve one family (except for a single pro bono matter). The simulation course work with these clients occurs in the two skills sections, of which Transactional Practice I is part. This includes counseling the mother regarding the disposition of shares of a family business under her will, negotiating and selling a piece of property from an estate, and selling the entire family business. Along the way, one of the children gets married and the mother seeks to persuade him to negotiate a prenuptial agreement, and later the son organizes a charitable business and has to face an IRS agent in an examination of organizational activities.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: L2LAWF, L3LAWP.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0463. Transactional Practice II. 2 to 3 Credit Hours.**

Transactional Practice II is part of the Integrated Transactional Program (ITP), a two semester, ten credit course package. See the description for Transactional Practice I (Law 462) for further information.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0462, JUDO 0602, and JUDO 0416 (may be taken concurrently))

**JUDO 0464. Draftng Solutn-Contracts. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0465. Affirmative Action. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0466. Intrnl Environmental Law. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0467. International Intellectual Property. 2 to 3 Credit Hours.**

Once thought of as a "niche" course taught in a few law schools, international intellectual property is rapidly becoming a staple of law school's intellectual property curriculum. International Intellectual Property is in many ways similar to, and in many ways different than, the United States' intellectual property law, which students study in an Introduction course. International intellectual property is similar because of the same intellectual property regimes, namely, copyrights, trademarks, patents, and trade secrets. Students will therefore see many of the same underlying principles and theories seen in the U.S. intellectual property course. This is not unexpected as other countries' intellectual property laws are similar to if not based on the U.S. laws. On the other hand, international intellectual property law is different because many more countries' intellectual property laws are not based on U.S. intellectual property law and are, indeed, vastly different than U.S. law. This is, in many ways, the fascinating part of international intellectual property law. This aspect involves not only understanding, but truly appreciating why each country has different laws. Each country has different histories, traditions, levels of economic and technological development, and has very different goals and abilities. We will explore these differences and what they mean for attempting to harmonize global intellectual property. Even more so than as with domestic intellectual property, international intellectual property law raises difficult questions about the relationship between citizens and government in a democracy; how we go about promoting progress and encouraging economic and technological progress; and the role of the courts and legislatures in determining who decides these issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.



**JUDO 0468. Consumer Bankruptcy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0469. Spoken Language/Legl Pro. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0470. Intl Negotiatn/Arbitratn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0471. Patent Prosecution. 2 Credit Hours.**

This course will focus on the legal issues that arise during the process of drafting patent applications and negotiating with patent examiners over patent validity. We will look at the prosecution history of a single successful patent application, and examine the kinds of decisions that the prosecuting attorneys were called upon to make and the ways in which questions about patent law, patent licensing, and the enforceability of patents and possible litigation concerns, help to shape the prosecution process.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547 and (JUDO 0552 or JUDO 0940)

**JUDO 0472. Patent Litigation. 2 Credit Hours.**

This course will address the manner in which patent cases are litigated, with special emphasis on a number of special issues that frequently arise in that context. Topics to be covered include preparation and content of the complaint and answer, discovery, the role of expert witnesses, preliminary injunctions, claim construction "and the "Markman hearing," proof of infringement and" damages, jury instructions, and appeals. There will be a number of hands-on exercises and a final examination.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547 and JUDO 0552.

**JUDO 0473. Biotechnology Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0474. Adv Patent Litigation. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0475. Adv Copyright Issues. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0476. Business Intellectual Property. 2 to 3 Credit Hours.**

The objective of this course is to address various intellectual property issues businesses may face when developing and selling products. Intellectual property is one of the most expensive capital outlays for many organizations today and this course will focus on business-to-business transactions and how IP issues affect different organizations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO 0477. Advocacy in Transactional Lawyering. 2 to 3 Credit Hours.**

This course offers advocacy techniques for those who anticipate practice in a non-litigation setting. Students work with the basic principles of advocacy that apply in various situations likely to be encountered in transactional and hybrid practice settings. Elements include theory and psychology of persuasion; rhetoric and argument devices, and communication skills. The course offers some exposure to the basics of questioning techniques and short arguments on the premise that non-litigators will need to appear in administrative settings (hearings and group presentations). The negotiation process is analyzed, with emphasis on advocacy techniques that can be employed along the way. There are readings, lectures, learning-by doing exercises, and review of videotapes. Grading is based on an accumulation of performance results and written submissions. The lawyering situations to be addressed in this course include: advising the client, and persuading why a particular course of action is in the client's best interests; negotiation - planning and use of techniques in the stages of the process; supporting a work product - making the oral presentation of an assignment; building cooperation in work groups - using brainstorming and other leadership techniques; marketing - basic theory/psychology of "selling", using practice anecdotes to understand storytelling technique; essentials of advocacy at administrative hearings; crossover - common characteristics of effective written and oral advocacy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0478. Introduction to Privacy Law. 2 to 3 Credit Hours.**

Information law deals with the flow of information - when do you restrict information and when do you let it flow? During this course, students will examine information privacy legal principles related to electronic surveillance, the media, anonymity, databases, genetic testing and neuroimaging, terrorism and national security, public and private sector information and home, school and work.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0479. Appellate Advocacy. 2 Credit Hours.**

The purpose of this course is to provide guidance to students concerning how to handle an appeal in the federal and state courts on a practical level. Toward that end, the class will attend two or three sessions of oral arguments at the United States Court of Appeals for the Third Circuit, the Superior Court of Pennsylvania and/or the Commonwealth Court of Pennsylvania. We will meet with judges of those courts who will hopefully attend our classes and provide illumination as to what we have observed in court. Experienced appellate advocates will appear as guest lecturers to provide us with the benefit of their experience and to share their knowledge and skills with the class. The instructor will provide the latest updates in appellate law and practice on a weekly basis. The class will use Judge Ruggiero Aldisert's leading text in this field, "Winning on Appeal," and there will be supplemental readings pertinent to this topic. There will be no written examination; however, the class will be provided with a transcript of a real trial and will be required to submit an appellate brief and thereafter to argue the case as if they were before an appellate court. Students will be judged on classroom participation, the written brief and those oral arguments.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0480. Securities Litigation and Enforcement. 3 Credit Hours.**

This course surveys a broad range of materials concerning theoretical and practical aspects of complex federal securities litigation and enforcement. It addresses actions and issues as they are likely to arise in actual securities litigation, such as class action securities fraud lawsuits, insider trading litigation, Securities Exchange Commission administrative proceedings and Department of Justice criminal prosecutions. This course is designed to be accessible without any prior familiarity of securities regulations, however, it does analyze conceptual subtleties, doctrinal nuances and practical issues that students are unlikely to have previously encountered in their securities regulations course. Finally, this course also provides all of the necessary financial economics background for securities litigation and enforcement in terms of an overview of capital markets efficiency and behavioral finance, which applies insights of empirical and experimental research in psychology and neuroscience to understand actual financial economic behavior.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0481. Environmental Law/Policy. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0482. Commercial Bankruptcy Practice and Procedures. 2 Credit Hours.**

Bankruptcy is an important component of commercial and business law that blends transactional and litigation practice, and requires lawyers with strong drafting, negotiating, and oral advocacy skills. This course is a general introduction to bankruptcy practice and procedures with principal emphasis on commercial reorganizations and liquidations under Chapters 11 and 7 of the Bankruptcy Code. The course will consist of lectures and discussions of problems and contemporary case studies designed to examine the law and policy of commercial bankruptcy, the powers and authority of bankruptcy courts and various practical and ethical issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0483. Transnational Insolvency. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0484. Global Climate Chng Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0485. Drug Products Liability. 2 Credit Hours.**

This course develops an understanding the interrelationship between drug products liability, professional malpractice, and hospital negligence. This course will explore the evolution of therapeutic drugs and devices from the manufacturer's submission of the Application to the FDA through the approval of the Application to the marketing and prescription. The course will then explore the role of the FDA, pharmacists, physicians, and hospitals in the delivery of therapeutic drugs and devices to the consumer, and their respective obligations to the consumer. In that regard, this course will examine the federal Food, Drug, and Cosmetics Act, as well as many other complex legal and ethical theories applicable to drug and medical devices manufacturers, pharmacists, physicians, and hospitals in their therapeutic drug and devices interactions with the consumer. Currently publicized incidents such as problems with the Jesse Gelsinger gene therapy at the University of Pennsylvania, and others will be dissected within the context of both products liability and professional malpractice law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0486. Law and Economics. 2 or 3 Credit Hours.**

This course's aim is to introduce students to the basic analytical construct of the economic analysis of law. Attention will also be given to the fundamental criticisms of this construct derived from recent scholarly exchange, including those flowing from new behavioral research.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0487. Adv Case Law Methods. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0488. Legsltv-Regulatory Advncy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0489. Corruption Law and Policy. 2 Credit Hours.**

This course will examine the phenomenon of public corruption. We will use recent and current corruption prosecutions -- from federal officials and lobbyists in Washington to local public officials and employees in the region -- as the focal point for discussion of the nature of public corruption, its costs, and efforts to combat or curtail it. Much of our focus will be on enforcement tools, including both relevant federal criminal statutes and investigatory techniques. The reading materials for this course will be reported decisions, law review articles, newspaper reports, indictments, briefs, and other court records from relevant cases.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0490. Doing Business on the Internet: The Law of E-Commerce. 2 to 3 Credit Hours.**

This course will focus on key issues confronting businesses as they migrate to an electronic environment. The course will examine the problems confronting the application of existing law to on-line commerce and then explore possible solutions to those problems. Authentication and integrity issues in cyberspace, electronic contracting, click wrap contracting, warranty liability in cyberspace, controlling the use of information in cyberspace, electronic payment models, marketing on the Internet, data security and privacy issues, data mining - using customer information/lists, social networking and e-commerce, protection of intellectual property rights, raising capital in high-tech businesses, taxation of electronic commerce and negotiability in electronic commerce are examples of topics that (time permitting) will be covered. The course will be "reality based": students will get hands-on experience with actual contracts and other materials in this field.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0491. Law & Higher Education. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0492. Gaming Law. 2 Credit Hours.**

This course will explore the constitutional and statutory basis for gaming; the regulatory structure to license and control gaming; legal issues involving Indian, shipboard, charitable and internet gaming; and the rights of patrons and licensees who frequent and work in casinos.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0493. Constitutional History. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0494. Advising the Multinational Company on Global Legal Issues. 2 or 3 Credit Hours.**

This interactive and participatory course is intended to provide a survey of the types of issues confronting lawyers, and particularly in-house lawyers, who advise multinational corporations on a worldwide basis. The areas to be discussed include topics that will cross corporate law, tax law, labor and employment law, employee benefits, litigation and corporate compliance. Real life examples will be used to illustrate the complicated nature yet importance of this type of practice. Further, in addition to the more substantive legal topics to be covered, the course will also be interspersed with practice tips, jurisdictional practice highlights and ethical considerations for the multinational practitioner. The success of the course depends highly on each class member coming to class prepared, and more important, on each class member participating in our discussions. Because of this, class participation will account for 30% of the final grade. The remaining 70% of a student's grade will be based on a final paper and presentation (weighted equally). Note: This course does not satisfy the graduation writing requirement.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0495. Family Law: Theory/Policy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0496. Legal, Professional and Business Aspects of Law Practice. 2 Credit Hours.**

This course focuses on the economics, ethics and practice management aspect of the law. It will introduce students to "life in a law firm" through the following concepts: Economics of Law Practice, Time Management, Client Development, Ethics of Practice. Each of these four general areas will receive roughly equal treatment during the course. In addition, the ethics component will overlay the other three areas in order to describe how the Rules of Professional Conduct govern the provision of legal services. Class sessions will include guest presenters who will discuss issues within their areas of expertise and work with students on real-world problems. Students will work in "law firms" of several students and will develop their own structure and organization, two-year financial projections, staffing patterns, administrative and management plans, practice systems, and marketing and business development strategies and tactics. Students will complete projects based on challenges that today's law firms and law departments face and present their projects to the entire class for discussion and critique. Class size will be limited.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0497. International Health Law. 2 Credit Hours.**

This course examines the many treaties, institutions and customs that govern how health is protected and promoted in the international system. Specific topics will include communicable disease control (e.g., SARS), chronic disease control (Framework Convention on Tobacco Control), international human rights and health, access to medicines (e.g., the TRIPS Agreement), the institutional structure of global health governance (World Health Organization, Global AIDS Fund), and health-related business regulation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0498. Election Law. 2 to 3 Credit Hours.**

Elections in the United States are largely governed by state law and, in a few instances, local law. However, there is a body of federal law, deriving from the Constitution and a number of federal statutes, that establishes rule rules for the conduct of elections. It is not possible, nor is it likely to be helpful, to review the vast array of state and local laws that govern most of the American electoral system. This course is therefore largely devoted to the federal law aspects that create the sometimes dense, sometimes porous framework for the conduct of American elections. Special attention is given to the constitutional aspects of federal election law as defined by the Supreme Court and, occasionally, by lower courts; but in several sections of the course there is attention to federal statutes and regulations. At a conceptual level, the course also inquires about the nature of representation and what inferences for election law might be drawn from different concepts of representation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0499. Constitutional Litigatn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0500. Admiralty. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0501. Adv Crim Pro: Defense. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0502. Criminal Law II. 3 Credit Hours.**

This course examines several aspects of substantive criminal law not covered extensively in Criminal Law I. Some of these subjects involve the interplay of substantive criminal law with constitutional issues, with evidentiary issues, and with procedural concerns -- all of which can better be brought to bear in an advanced course. Possible topics includes: limitations on what conduct should be criminalized; proportionality and legality limits; group criminality (advanced concepts involving corporate liability and conspiracy); exculpatory defenses based on mental illness and more recently developed defenses; entrapment; and an extensive examination of selected crimes such as rape and the theft related offenses.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0503. Criminal Appellate Procedure. 2 to 3 Credit Hours.**

The major focus of this course is on the procedures and rights involved in the appeal of a criminal case. (Many of these procedures are similar to those in civil cases.) Attention is given to understanding the implication of appellate rules for the trial of a case. The role of the appellate courts, as well as of appellate attorneys, is also examined. That portion of the course dealing with prosecutor appeals affords an opportunity for an extensive examination of important aspects of double jeopardy. Some brief attention also may be given to various forms of "collateral attack" litigation and post-verdict trial court motions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0504. Antitrust. 3 Credit Hours.**

The relevant federal statutes which regulate the competitive process and their interpretation by the courts are considered. Classroom discussion also covers the policy rationale for such regulation and economic conditions are examined.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0505. Criminal Procedure II. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0506. Banking and Financial Reg. 2 to 3 Credit Hours.**

This class will provide students with corporate, regulatory, or litigation backgrounds with a rich understanding of the increasingly complex interaction between state and federal regulations (designed to promote efficiency, growth and fairness) and our nation's complex web of money moving institutions (banks, credit card companies, investment banks, S&L's, credit unions, brokerage houses, pay-day loan shops, etc.).

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0507. Condominiums & Cooperatives. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0508. Corporations. 3 Credit Hours.**

This course is an introduction to the law and policy governing corporations. Corporations are legally created entities designed to facilitate accumulation of large amounts of capital (that is money and other things of value). They do so primarily by offering investors the opportunity of a financial return on their investment, without the requirement to undertake financial risk (above the amount invested) or responsibility for managing the enterprise. Thus, corporations permit passive investment and the separation of ownership and control. Most of the law governing corporations are designed to regulate the relationships between owners (equity investors) and managers and to provide rules to govern managers in the exercise of power over actions of the company.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0509. Comparative Constitutional Law. 3 Credit Hours.**

This course will engage in a comparative study of selected constitutional problems, with particular emphasis on the constitutional law of the United States in comparison and contrast with the constitutional law of various other democratic nations, including the European Union and its constituent states, Australia, Canada, India, Israel, Japan, South Africa, and others. Topics will include issues of constitutional structure (e.g., judicial review, separation of powers, executive authority, federalism) as well as human rights in such contexts as abortion, criminal punishment, gender equality, sexual orientation, protection for linguistic and cultural minorities, freedom of expression, and freedom and establishment of religion.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0510. Business Planning. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0511. Corporate Taxation. 2 to 3 Credit Hours.**

This course provides an overview of the taxation of corporations and their shareholders. It examines the concept of a corporation for tax purposes, corporate formations, debt versus equity, dividends and distributions, penalty taxes on undistributed income, redemptions and partial liquidations, Section 306 stock, liquidations, collapsibility, reorganizations, corporate divisions, affiliated corporations and corporate tax attributes.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 0512. Social Science Methodology. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0513. Aviation Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0514. Intl Commercial Trans. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0515. Media and Telecommunications Law. 2 to 3 Credit Hours.**

This course will examine the regulation of electronic communications in the United States. The course will focus on the media, telephone, cable, broadcast, satellite, and Internet industries - industries that are rapidly changing, highly competitive, and significant drivers of economic growth. We will examine traditional regulatory frameworks, the manner in which technology is challenging these frameworks, and the regulatory response to these changes in technology. Some of the issues that will be considered are questions of market entry, access, pricing, and content.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0516. Comparative Law: Africa. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0517. Civil Procedure II. 2 to 3 Credit Hours.**

The litigation process from the pleading stage through appellate review is thoroughly studied. Areas covered in detail include: pleading, complex multi-party litigation (class actions, necessary parties, inter-pleader, intervention, multi-district litigation); discovery practice; pre-trial conference; trial and post-trial procedures; fundamentals of appellate review, securing and enforcing judgments; and problems of judicial administration.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0518. Comparative Law. 2 or 3 Credit Hours.**

A study of the origins, structure and distinctive features of the two main legal traditions of Western Civilization - the Civil Law and Common Law traditions - and their influences on selected national legal systems around the globe.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0519. Custom-Common Law-Africa. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0520. Adv European Union Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0521. Com Law: Dispute Settlement. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0522. Conflict of Laws. 3 Credit Hours.**

This course studies problems of jurisdiction and choice of law arising from our federalist system of government. The course emphasizes conflicts among state laws governing daily transactions as well as principles governing enforcement of state judgments. The course may also investigate issues implicating the Erie doctrine and federal common law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0523. Partnership Taxation. 2 to 3 Credit Hours.**

The purpose of the course is to provide students with a basic understanding of the taxation of business entities under Subchapters K of the Internal Revenue Code. The focus of the course is on the relationship between a "pass-through" business entity and its owners. Consequently, in looking at the tax implications of business operations, this course will focus on the partnership and, in particular, its partners. In doing so, it will survey issues pertaining to the formation, operations, distributions, and liquidation of partnerships.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 0524. Consumer Law and Litigation. 1 to 3 Credit Hour.**

Through lecture, class discussion and case problems, this course will examine federal and state statutes, regulations and judicial decisions governing consumer financial transactions. The primary focus will be on the litigation of disputes in this area. Significant attention will be paid to the emerging problem of theft of credit identity. The course will be permeated with actual consumer problems and contracts, with emphasis throughout upon case strategy and the impact of federal procedure on gaining advantage in litigation. Time will be devoted to trial issues that arise in a consumer case, especially with regard to voir dire and opening statements.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0525. Corporate Finance. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0526. State Constitutional Law. 3 Credit Hours.**

This course emphasizes the following topics: the role of state constitutions in the federal system; state constitutional protections of individual liberties; interpretation of state constitutions; separation of powers; the judicial, legislative and executive branches of state government; finance and taxation; and amendment and revision of state constitutions. Up to one half of the final grade in this course will be based on a ten to twelve page paper selected by the student from the topics covered in the course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0527. China/Bus WTO Regime. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0528. Corporate Reorganization: Chapter 11 Bankruptcy. 1 to 3 Credit Hour.**

This course examines selected matters under Chapter 11 of the Bankruptcy Code. It will address both process and substantive law, as well as practical considerations, most recent decisional law developments and proposed Bankruptcy Code reforms.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0529. Adv Con Law: Equal Protct. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0530. Bankruptcy. 3 Credit Hours.**

Our basic Bankruptcy course is designed to give you a good grounding in the Bankruptcy Code and the associated law governing the enforcement of civil judgments. The course focuses on personal (rather than business) bankruptcy. It deals with the structure of the Bankruptcy Code and the costs and benefits the process represents to those who become involved with it either as debtors or as creditors. This simpler context of personal bankruptcy will allow you to absorb complex policy issues more readily than would an earlier foray into the bankruptcy of businesses. Business bankruptcy, by itself, is sufficiently complex to support its own course (Chapter 11 Reorganization) for students already versed in basic bankruptcy and corporate law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0531. Corrections Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0532. Criminal Procedure I. 3 Credit Hours.**

This is a basic criminal procedure course, dealing mainly with the various constitutional rules governing police conduct prior to the institution of formal court proceedings. The major focus is on the federal constitutional rights and restrictions imposed by the Fourth, Fifth, Sixth and Fourteenth Amendments. Searches and seizures, police interrogation, identification procedures and the exclusion of evidence obtained in violation of these provisions account for a substantial portion of the course. Some additional matters are covered, including some aspects of the formal court-connected proceedings and the basic principles of habeas corpus.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0533. Com Land Use & Envrnmnt. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0534. Education Law. 2 Credit Hours.**

This course surveys a range of legal issues affecting children in our nation's elementary and secondary schools, with considerable emphasis on policy and on problems of equal educational opportunity. Topics include the differing legal frameworks applicable to public, private and religious schools; the right, if there is one, to a quality education; issues of racial and class disparity; the education of students with disabilities, English language learners, and others with special needs; freedom of expression in schools; school discipline; and school finance equity.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0535. Entertainment Law. 2 Credit Hours.**

This course deals with selected legal issues which affect persons active in various aspects of the entertainment industry. These include pertinent contract, copyright, business association, securities regulation, communications and tax law issues. Special emphasis is given to the theater and to the recording and television industries.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0536. Environmental Law. 3 Credit Hours.**

Private law remedies, administrative and legislative regulatory schemes to control use and abuse of environmental resources are examined. Principal emphasis is placed on air and water allocation in a federal setting and national environmental policy is reviewed.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0537. Employment Discrimination. 2 to 3 Credit Hours.**

The course covers race, sex, age and handicap discrimination in employment. The historical antecedents to modern discriminatory practices and early 19th and 20th century legislative and judicial efforts to curb discriminatory practices are studied, as well as the various federal statutes and Executive Orders establishing non-discrimination and affirmative action obligations and the source of congressional and executive authority to prescribe these rules. Also covered are the non-discrimination obligations imposed by and the affirmative action activity permitted by the Fourteenth Amendment to the United States Constitution and other relevant constitutional issues, including those arising under the Tenth and Eleventh Amendments.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0538. Estate Counseling. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0539. Adv Evidnc: Prsmpt/Con Lmt. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0540. Evidence. 3 Credit Hours.**

An examination of the rules governing the use of evidence, including problems of relevancy, hearsay, impeachment, burden of proof, presumptions and the function of judge and jury.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0541. Adv Evidence/Trl Tactics. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0542. Federal Courts and Jurisdiction. 3 Credit Hours.**

This course analyzes the constitutional and statutory contours of procedure and jurisdiction in the United States courts. Course materials address the role of federal courts in protecting federal rights and supervising state governments. Topics may include justiciability (including doctrines of standing, mootness, ripeness and political questions); congressional control of jurisdiction; legislative or Article I courts; federal questions; federal common law; diversity jurisdiction; supplemental jurisdiction; state sovereign immunity under the Eleventh Amendment; habeas corpus; civil rights suits under 42 U.S.C. 1983; and abstention.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0543. Federal Practice. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0544. Estate and Gift Taxation. 3 Credit Hours.**

The federal estate and gift tax principles which apply to inter vivos and testamentary transfers of property are examined in this course. Tax consequences of various dispositive devices will be considered together with the marital deduction, the charitable deduction and valuation problems. The generation-skipping tax will be introduced.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 0545. Intrnl Contrl Environmnt. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0546. Food and Drug Law. 2 Credit Hours.**

The governance of interstate and intrastate commerce in foods, drugs, cosmetics, medical devices is studied. Emphasis is placed upon the effect of the Federal Food, Drug and Cosmetic Act upon the research, manufacture, marketing and distribution of drugs through the regulatory activities of the federal agencies. Through illustration, case study and comparison, other articles and pertinent state laws and agencies are also considered.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0547. Introduction to Intellectual Property. 3 Credit Hours.**

This course will cover the broad outlines of the four major branches of intellectual property law: patent, copyright, trademark, and trade secret law. Time permitting; the course also will look at the emerging doctrine of "misappropriation" as applied to intellectual property. The course will look generally at why (and how) intellectual property law differs from the law governing real property or tangible personal property, as well as at the special features of each of these sub-fields of intellectual property law. The course should provide a helpful overview of this area of the law for students who do not plan to specialize in intellectual property, as well as providing those who plan to go on to more detailed study of, and practice in, this area with an introductory exposure to the kinds of problems that are common to all intellectual property disciplines.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0548. Housing Law. 2 to 3 Credit Hours.**

Like many cities across the country, Philadelphia faces an eviction crisis. Court filings underestimate the problem, as illegal evictions occur outside of the judicial system. Low-income households headed by Black women with children are disproportionately impacted. This course will explore how we got here and efforts by Philadelphia government and legal non-profits to reduce evictions and maintain stable households and neighborhoods.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0549. Insurance Law. 2 to 3 Credit Hours.**

Insurance contracts, types of coverage, insurable interests, beneficiary rights, creditor and assignee rights, powers and duties of insurer and insured are examined.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0550. Immigration Law. 3 Credit Hours.**

The course provides a detailed overview of the laws which enable individuals to enter, reside in and ultimately become citizens of the United States. Among the topics discussed are: U.S. immigration policy and the limits of legislative and executive regulation of individuals, racial and geographic quotas, types of visas, arrest, detention, grounds of excludability of individuals and of waiver of excludability, political asylum and refugee admission, processing of relative and employer petitions, change of status within the U.S., administrative procedures and appeals, nationality by birth and by naturalization, revocation and expatriation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0551. Trademarks and Unfair Competition. 2 Credit Hours.**

Addressing both theoretical and practical issues, this course combines a traditional law school examination of common law and statutory principles with a "real world" application of those principles as a practitioner sees them. The principles include unfair competition topics such as the right of publicity, misappropriation of trade values and trade secrets, regulation of false and deceptive advertising, and interference with contract and trade relations. The principles focus, however, on trademark law topics such as the creation and maintenance of trademark rights, infringement of trademark rights and dilution, special defenses and limitations, and remedies. These topics are examined in light of modern advertising and marketing practices, including special issues raised by the Internet and international considerations. Among the more practical aspects covered are the federal trademark registration process, proceedings before the Trademark Trial and Appeal Board of the U.S. Patent and Trademark Office, and highlights of trademark litigation in the courts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO 0552. Patent Law. 2 to 3 Credit Hours.**

This course provides an extended introduction to United States patent law. Topics covered include the patenting process, patent-eligible subject matter, patent validity requirements, patent infringement, and the nature of rights secured by a patent. The course also briefly examines trade secret law, and discusses the relationship between, and the relative advantages and disadvantages of, patent and trade secret law for protecting intellectual property rights in inventions and discoveries. This course will provide a broad overview of the law and policy of the U.S. patent system. Topics to be covered include the nature of patentable subject matter, the standards for assessing patent validity (novelty, utility, and non-obviousness), Patent Office procedures, infringement and the doctrine of equivalents, and remedies for patent infringement.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO 0553. Copyrights. 2 to 3 Credit Hours.**

The goal of this course is to introduce students to the basics of US copyright law. Without detracting from this goal of covering the (domestic) copyright basics, we will also look at these issues in the specific context of these new technologies and the growing internationalization of copyright law, in order to introduce you to some of the problems that are likely to arise as copyright law enters the next century. Topics to be covered include the subject matter of copyrights, copyright ownership, the scope of copyright protection, the nature of the copyright infringement inquiry, the "fair use" and other defenses, and selected issues concerning the international enforcement of copyrights.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO 0554. International Investment and Trade Policies. 3 Credit Hours.**

This course focuses on the law of international investments and trade policy and covers the nature of the international investment transaction and the various forms of regulation thereof. The course will also consider national governmental policies dealing with trade and the restriction thereof.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0555. Environmental Law Problm. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0556. International Law. 3 Credit Hours.**

The role of authority in the decision-making processes of the world community is studied. The process by which international law is made and applied and the public order established is examined. The interrelationships (legal, power, economic, human) of groups organized on a territorial-state basis are examined in context. Traditional topics in private and public international law are included.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0557. Interviewing, Negotiating and Counseling. 1 to 3 Credit Hour.**

An in-depth study of three pre-litigation lawyering skills is provided. Readings include legal and non-legal materials on interpersonal relationships. Students engage in video and audio-tape simulation exercises.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0558. Introduction to Trial Advocacy. 3 Credit Hours.**

Armed with the prerequisite, Evidence, this course introduces the student to the law of trial advocacy. "In a "learning by doing" or student performance format," students are taught the basic trial advocacy skills of making and meeting objections, direct and cross examination, introducing and opposing exhibits, impeachment of witnesses, examination of experts, and delivering opening statements and closing arguments. Students are placed in performance sections which are capped at 12 and attend a weekly lecture or demonstration geared to the weekly assignment. Students must sign up for both a two-hour performance section and the one-hour lecture section. Successful completion of ITA meets the advocacy requirement for clinicals.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0540.

**JUDO 0559. Jurisprudence. 2 Credit Hours.**

This course will explore the Natural Law and Natural Rights traditions in Western Thought.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0560. Juvenile Justice. 2 to 3 Credit Hours.**

Students will examine how the law, and particularly Supreme Court jurisprudence, treats juvenile offenders in both the juvenile justice and adult criminal justice systems. Students will begin by learning about the history of the juvenile justice system. They will then consider the case law governing the stages in delinquency proceedings, from interrogation through sentencing. Students will consider and analyze how juvenile offenders are treated differently from adult offenders and the implications for legal advocacy. Particular attention will be given to emerging research on adolescent development and its influence on juvenile law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0410 and JUDO 0532 (may be taken concurrently))



**JUDO 0561. Public Employment Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0562. Labor Law. 3 Credit Hours.**

The employment relationship in a unionized context is examined. Strikes, picketing, secondary boycotts, injunctions and employer and union unfair labor practices are studied. The National Labor Relations Board's function as an administrative agency is emphasized.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0563. ATA/Persuasion Elements. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0564. Land Use Planning. 3 Credit Hours.**

Land use law focusing on zoning, including the traditional elements such as spot zoning, variances, special exceptions, planned unit developments, as well as the emerging law of exclusionary zoning, zoning to control perceived undesirable uses of land such as adult book stores played off against First Amendment rights, damage actions under Sec. 1983 for land use decisions by local government, subdivision process and substance, eminent domain and some emphasis on historic preservation, private land use controls such as covenants and easements and nuisance principles.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0565. Advanced Trial Advocacy (Criminal). 3 Credit Hours.**

This course is designed to provide an in-depth understanding of the criminal trial process from initiation of charge through verdict. Intensive examination of case theory as it relates to all phases of the trial will be stressed. In addition to trying two complete jury trials, students will perform at preliminary hearings and motions to suppress. Special emphasis will be placed on the examination and cross examination of experts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0410, JUDO 0532, and JUDO 0540) and (JUDO 0558 or (JUDO 0460 and JUDO 0461))

**JUDO 0566. Mental Health Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0567. Law Science & Technology. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0568. Family Law. 3 Credit Hours.**

The role of the family and its connection with the legal system is considered, including the law pertaining to marriage, annulment, divorce, support and maintenance of the wife, children and other relatives, separation agreements, child custody, guardianship, status of wife, business transactions, property rights of husband and wife and intervention of the legal system in family affairs.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0569. Advanced Trial Advocacy (Civil). 3 Credit Hours.**

This course provides an intensive examination of the theory and practice concerning the examination of witnesses and the boundaries of "Relevant Evidence" with the primary focus on selected topics of impeachment and rehabilitation. The course is designed to provide an in-depth understanding of the trial process system from the perspective of the courtroom lawyer, an ability to perform certain trial skills within the ambit of witness examination and an analysis of trial tactics and techniques as well as trial rules and procedures. Articles VI and IV of the Federal Rules of Evidence are studied in-depth and explored in their application to the courtroom experience.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in ((JUDO 0540 and JUDO 0558 (may be taken concurrently)) or (JUDO 0460 and JUDO 0461 (may be taken concurrently)))

**JUDO 0570. Accounting for Lawyers. 2 Credit Hours.**

The course is designed to simplify the accounting process and instill confidence in students that they can handle situations where accounting and finances come into play. The course will explain the accounting process from original entry to the production of financial statements; it will critically examine evolving accounting standards and procedures; students will learn to analyze financial statements; the importance of the time value of money, and the various liabilities that will be of importance to them; and accounting problems. Finally, students will learn about accounting systems and the importance of internal control. The course is designed for students who have no previous study of accounting but who plan to engage in commercial, corporate, tax, or any legal practice where finances are an issue.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0571. International Taxation. 2 or 3 Credit Hours.**

This course on the fundamental concepts in the taxation of transnational transactions covers basic issues involved in both the taxation of the foreign operations of United States taxpayers (outbound transactions) and the United States taxation of income received by foreign individuals or entities (inbound transactions). Thus, the course will address questions of jurisdiction to tax, source of income, the foreign tax credit, tax treaties, the effect of currency fluctuations and, of course, the operations of the controlled subsidiaries of United States corporations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 0572. Intl Tax Joint Ventures. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0573. State/Local Tax Finance. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0574. Local Government Law. 2 to 3 Credit Hours.**

This class, like most Local Government Law classes, will focus on the relationships between (1) cities (and other local government units, such as counties and towns) and (2) superior governmental units (the federal and state government) and citizens; the law governing these relationships; and the law governing the internal workings of local government units.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0575. Legislation. 3 Credit Hours.**

Aspects of the legislative process most significant for the practicing lawyer are considered. The course begins with introductory materials on the structure and function of the legislative process as compared and contrasted with the judicial process. The bulk of the course is devoted to a thorough examination of the main approaches to statutory interpretation: statutory text; legislative intent; purpose and contexts as revealed in legislative history; and the canons of statutory construction. The topics of judicial deference to administrative interpretation and clear statement rules will also be thoroughly canvassed.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0576. Payment Systems. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0577. Business Taxation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0578. Political and Civil Rights. 3 Credit Hours.**

Civil rights and individual freedoms under the First and Fourteenth Amendments are examined.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0579. Contractual Relations. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0580. Legal Advocacy/Soci Chng. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0581. Adm Pro: Grants/Benefits. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0582. Products Liability. 2 to 3 Credit Hours.**

Problems arising from the research, manufacture, marketing and advertising of a wide variety of products available to the consumer are used to provide basic understanding of the determinants in prosecution and defense of products liability claims sounding in contract or in tort, breach of warranty, fraud, misrepresentation. Pertinent statutory and case materials are examined as a basis for both counseling and conduct of litigation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0583. International Protection of Human Rights. 2 Credit Hours.**

This course is designed as an introduction to issues of law, policy and institutional machinery for the promotion of human rights in the world community. The course will focus first on 20th century genocide against the Armenians and Jews and then study the following problems: (1) Are nations bound by human rights laws (such as treaties, customary international law, U.N. Charter, European Convention, etc.). (2) Are the courts of a nation so bound. (3) Where there is violation of human rights law, when and under what circumstances may diplomatic intervention, economic sanctions and/or military force be used to redress the wrongs or to cause compliance with human rights guarantees.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0584. Public Utilities. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0585. Racism & Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0586. Real Estate Development Finance. 2 Credit Hours.**

This course looks at the law and economics involved in commercial real estate projects from start to finish, including an examination of some of the practical considerations inherent in the development and financing of commercial real estate.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0587. Real Estate Transactions. 2 Credit Hours.**

The essentials of land transfer with emphasis on agreement of sale, deed, title examination, rights and remedies of all parties are studied. Financing and relevant tax considerations are given limited attention.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0588. Remedies. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0589. Secured Transactions. 2 to 3 Credit Hours.**

Creation, perfection and enforcement of security interests in personal property under Article Nine of the Uniform Commercial Code. A major component of this offering concerns the interaction of Article Nine with the Federal Bankruptcy Law and the effect of the bankruptcy law upon a lender's decisions and expectations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0590. Securities Regulation. 3 Credit Hours.**

Federal and state regulation of the sale, distribution and trading of securities, including an inquiry into the liabilities of officers, directors, attorneys and accountants, is studied.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0591. Social Legislation: Law and the Elderly. 3 Credit Hours.**

This course examines the specific programs and the implications of social politics and principles that affect the elderly. Topics to be considered include public entitlements/benefits programs, income maintenance, health care, guardianship and long term care.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0592. State & Local Taxation. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0593. Product Safety. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0594. Status & Process. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0595. Econ/Stat Experts Litgtn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0596. Adv Crim Pro Corr & Sanct. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0597. Adv Business Taxation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0598. Real Estate Problems. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0599. Mass Media-Law of Torts. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0600. Taxation. 3 Credit Hours.**

This course will introduce you to the principles, policies and structure of the federal income tax system. Basic concepts relating to income taxation including gross income, exemptions, deductions, capital gains and losses, and the splitting of income are studied. You will learn who is taxed, what they are taxed on, how much they are taxed, and when they are taxed by studying both the Internal Revenue Code and the judicial and administrative pronouncements that interpret it. You will have the opportunity for detailed examination of the interaction between the three branches of government because the legislature (Congress) writes the statute, the executive (Treasury and IRS) interprets and administers it and the judiciary (the Tax Court and the Federal courts) settles disputes.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0601. Sports Law. 3 Credit Hours.**

This course explores issues at the intersection of law and sport in both the amateur and professional contexts. Among other issues, the course will engage questions of liability arising from players' injuries and questions of professional responsibility faced by the lawyer-agent.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0602. Trusts and Estates. 3 Credit Hours.**

This course provides a survey of the principal devices utilized in the transmission of accumulated family wealth, concentrating primarily on the requirements for creating, modifying and terminating wills and trusts. Intestate succession and will substitutes are also considered as are selected issues concerning future interests, powers of appointment and fiduciary administration. The course explores the often clashing policies of effectuating donative intent and restraining dead-hand control.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0603. Unfair Trade Practices. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0604. Urban Transportation. 4 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0605. Public Administration. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0606. Women and the Law. 3 Credit Hours.**

This course presents a historical panorama of the special status accorded women in the Anglo-American legal system from its earliest time through the present. Any study of a complex historical process encourages observation of the interaction between socio-cultural and legal values. Thus, students enrolled in this course will be able to examine the cybernetics of law and social policy in the particular context of women's issues. Finally, a focus on recent changes in the law respecting women provides students with the opportunity to explore the possibilities of a positive role for lawyers and the legal system in the lives of American women.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0607. Comparative Law: Roman. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0608. American Legal History. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0609. Civil Rights/Disabilities. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0610. Workers' Compensation. 2 to 3 Credit Hours.**

The objective of this course is to impart fundamental knowledge requirements for developing the necessary analytical skills enabling recognition of workers' compensation issues and defenses; applying applicable compensation law; and procedurally navigating the litigation claims process and adjudicatory system. Students will analyze factual scenarios using the Pennsylvania Workers' Compensation Act, administrative rules, and relevant case law. Some classes will incorporate guest speakers, including attorneys currently practicing in this area, state regulators, and judicial officers.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0611. Collective Bargaining. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0612. Constitutional Law and Foreign Policy. 2 Credit Hours.**

This course explores the relationships of selected principles of constitutional law and adjudication with the conduct of U.S. foreign policy; especially from World War II to the present.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0613. Health Care Law: Bioethics. 2 Credit Hours.**

This course examines bioethics as it applies to health care problems. Representative topics are: definitions of life and death; organ and tissue transplants; procreation problems; genetic counseling; abortion; sterilization; in vitro fertilization; surrogate parenting; wrongful birth and wrongful life; life and death decisions and medical experiments with human subjects.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0614. Health Care Law: Medical Malpractice. 2 Credit Hours.**

This course examines the professional responsibility of physicians and other health care providers. Representative topics are: the professional patient relationship; quality control and risk management; standards of care; defense to malpractice actions; hospital patient responsibility; manufacturer patient responsibility; tort reform; medical evidence and damages.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0615. Health Care Law: Regulation and Financing. 2 to 3 Credit Hours.**

This course surveys fundamental concepts affecting U.S. health law and policy, including healthcare financing and delivery through Medicare, Medicaid, managed care organizations and private health insurance; expanding access to health care services; regulatory mechanisms for ensuring the quality of health care and controlling cost; legal relationships between professionals, patients, and institutions; and the impact of national health reform (i.e., the Affordable Care Act).

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0616. Constnl Torts & Remedies. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0617. Health Care 21st Century. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0618. Government Contract Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0619. Human Rights/Emergency. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0620. Exclusionary Zoning. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0621. Victimology. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0622. Sales. 3 Credit Hours.**

This course looks at formation, performance and enforcement of contracts involving the sales of goods. Most of the course focuses on Article 2 of the Uniform Commercial Code but the course also touches Articles 2A, 5, and 7 of the UCC, the Convention on the International Sale of Goods (CISG) and other sources of law. Of the Uniform Commercial Code offerings, the Sales course will be the most familiar to students and builds directly on doctrine familiar to them from the first year Contracts courses.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0623. Alternative Dispute Resolution. 2 to 3 Credit Hours.**

This course covers the main alternatives civil courts, now commonly called "Alternative Dispute Resolution" (ADR): competitive negotiation; principled negotiation ("Getting to 'Yes'"); mediation; and arbitration. In addition, a segment of the course explores ways in which courts are using ADR and in which states are creating ADR units to mediate public-impact disputes. The pedagogy includes overview lectures, readings (an excellent textbook exists), role plays (all students participate once), videos, and several guest speakers.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0624. Fed American Indian Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0625. Employment Law. 3 Credit Hours.**

This course explores, in a manner suitable for non-specialists, issues of employer-employee relations in nonunionized settings. It supplements existing courses by examining problems such as: wrongful discharge and employment-at-will at common law; fair labor standards including minimum wages and maximum hours; comparable worth and equal pay; industrial accidents and occupational safety and health; income security, unemployment compensation and pension protection; employment discrimination; employees' rights in areas such as drug testing, lie detectors, privacy, whistle blowing; plant closings, job retraining, status of aliens and employer-employee cooperation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0626. Tax Policy. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0627. Litigation Strategy. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0628. Ethical Perspectives Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0629. Privacy. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0630. Trusts & Estates II. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0631. Public Health Law. 2 Credit Hours.**

This course surveys the broad terrain of law and the public's health. We will cover both the "laws on the books" and the problems of actually implementing these laws in the often highly politicized and culturally sensitive context of health and behavior. Topics include the basic powers, duties and limitations of state health authorities in the United States; the epidemiological influence of law on health and health behavior; the global system of health governance; and the application of a human rights framework to health issues. Health topic areas covered include communicable diseases (HIV, SARS, emerging infections), tobacco, substance abuse, chronic diseases and infections. We will also devote considerable time to reading about and discussing how health is "socially constructed" and how stigma, economic self-interest and other cultural responses to disease complicate efforts to promote public health.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0632. Federalism. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0633. First Amendment. 2 to 3 Credit Hours.**

This course offers an in-depth examination of the protections afforded by the First Amendment.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0634. Religious Rights. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0635. Computer Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0636. Intl Employmnt Relations. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0637. International Commercial Transactions. 3 Credit Hours.**

This course is designed to provide an introduction to transactional work undertaken by international commercial attorneys. The course focuses on international and national regulation of international economic transactions, particularly sales of goods across international borders. Particular attention is given to the export sale and its financing; the international transfer of technology; and the regulation of foreign direct investment.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0638. Comparative Corporate Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0639. Adv Securities Regulatn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0640. ADR: Negotiating Settlements. 1 to 3 Credit Hour.**

This course focuses on learning negotiating skills.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0641. Taxation II: Commercial and Property Transactions. 2 to 3 Credit Hours.**

This course builds upon the foundation laid by the basic course in Taxation which covers principally income and deductions. Taxation II will cover additional broad-based tax principles which are of concern to all classes of taxpayers and their advisors. As to capital transactions, the course will cover the distinguishing of capital gain from ordinary income, the determination of basis, the realization of gain or loss in non-cash dispositions, the amount of gain realized, the requirement of a sale or exchange for capital treatment, the nonrecognition of deferral of gain or loss in specified situations, and the treatment of certain amounts realized in otherwise capital transactions [including original issue discount] as ordinary income. As to timing and recognition, Taxation II will cover tax accounting periods and methods, the proper year of inclusion of income items and of taking of deduction items, the requirement of inventories for those engaged in the production or purchase and sale of goods, the effects of changes in the method of accounting, and the mitigation of the annual tax accounting period requirement through the carry back and carryover of certain losses and unused credits, where the taxpayer or the Internal Revenue Service treats related items inconsistently, or where amounts received under a claim of right are restored.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 0642. International Organizations. 2 to 3 Credit Hours.**

This course explores issues of international law, authority, and legitimacy regarding international organizations and their operations in the world community, including the United Nations, the World Trade Organizations, the International Monetary Fund, and the African Union. Exploration of the International Court of Justice and the International Criminal Court raise particular questions in this regard about the international rule of law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0643. Law of Public Finance. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0644. Pension/Employee Benefit. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0645. Parents, Children and the State. 2 to 3 Credit Hours.**

This course is designed to examine the allocation of power between children, parents, and the government both within and outside of the family unit and to explore how law can be used to both oppress and empower children and their families. Rather than providing a survey of family law, this course focuses primarily on the intersection of poverty law issues and interventions into the family by public institutions designed to promote social welfare and to protect and nurture young people. The course asks the students to use doctrinal analysis, policy review, and simulation exercises to explore the appropriate boundaries of state intervention into the family, the distinct substantive rights of minors and the role of counsel for families and children. Students should enter the course with a basic understanding of Constitutional law, along with a desire to explore social welfare through a variety of mediums.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0646. Intrnl Litgtn & Arbitrn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0647. Federal Criminal Law. 3 Credit Hours.**

This course will examine the structure of federal law enforcement, the scope of federal criminal law and techniques for limiting federal criminal authority. It will address the problems of fraud and political corruption and specifically examine the crime of mail fraud, violation[s] of the Hobbs Act and examine official bribery. The course will include an examination of drug trafficking and money laundering. Group and organizational crime will be addressed through examination of conspiracy and the racketeer influenced and corrupt organizations statute. As time permits, students may also examine federal sentencing guidelines and forfeiture provisions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0648. Islamic Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0649. Church-St Relatns Israel. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0650. Corporate Transactions: Analysis and Implementation. 2 Credit Hours.**

This course will explore the legal principles involved in analyzing, structuring, documenting and implementing corporate transactions. Students will examine the legal principles and practical considerations of corporate formation; mergers; acquisitions; going public; and takeovers. Consideration will also be given to the ethical considerations involved in representing the corporation, its shareholders, officers and directors.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0651. U.S. Business Planning for International Transactions. 2 Credit Hours.**

The course will address a number of major, recurring issues that confront attorneys in international commercial practice. In particular, the course will cover the choice and formation of corporate entities (including the allocating of control among participants and planning the capital structure), legal and economic issues to consider when choosing a foreign partner, various financing issues (including the role of senior debt, mezzanine debt, common stock, ADR's letters of credit, etc), issues arising out of the purchase and sale of a business, and the major international tax implications arising out of choice of entity and formation of entity issues. In addition, it will address ethical issues that arise in international business representation. Much of the course will involve the close examination of redacted documents from international transactions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** JUDO 0508 (may be taken concurrently)

**JUDO 0652. Cyberlaw and Policy: Practical Applications in Organizational Settings. 2 Credit Hours.**

This course is a practical and concrete course applying Cyberlaw to pseudo-clients in legal practice. Legal and policy principles are studied that should be included in an acceptable use of electronic communications and technology policy. Included are the legal aspects of Internet, computer and information technology such as cyberprivacy, cybersecurity, commercial disparagement and defamation, cybercrimes, computer forensics, e-business, electronic issues. Students will be expected to prepare an acceptable use policy that is usable for a private corporation or public entity.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0653. Immigration Law & Policy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0654. Business Immigration Law. 1 to 4 Credit Hour.**

There is little or no doubt that much of the US economy is (and always has been) powered by foreign workers. Although the demand for certain types of workers may vary, we as a nation will need foreign nationals to fill important gaps in our economy. This course will examine the different ways US employers can hire workers from outside of the United States, as well as the options for foreign employers investing in or trading with the United States. It will also cover some of the ways in which particularly well-qualified foreign citizens can enter the United States without a sponsoring employer. We will also review some of the obligations the hiring of non-citizen workers places on employers, and the unique legal considerations in recruiting, hiring, and promoting foreign nationals. This course will provide a brief introduction to some of these issues, providing students with the information necessary to spot them before they become problems.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0655. Mediation Advocacy & Practice. 2 to 3 Credit Hours.**

This course provides an introduction to the theoretical and practical aspects of mediation as an alternative to litigation. Students will engage in a number of simulations and will receive verbal and written feedback from the instructor.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0656. Law & Medicine Problems. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0657. Religion-Workplace/Socty. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0658. Globalization and the Constitution. 3 Credit Hours.**

This course will consider the consequences of globalization for law, with a particular focus on globalization at the intersection of U.S. constitutional law. The course will address the analytical challenges posed by the increasing density of communications, porosity of borders, and intensity of economic interdependence. The course will situate such issues as the war and treaty powers in both their historical and contemporary context, and explore the rising profile of international law in the U.S. constitutional regime. Particular focus will be directed at new actors in international decision-making, including U.S. states, individuals, corporations, and non-governmental organizations, and how their participation is affecting the legal structure of foreign relations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0659. The Global Workplace. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0660. Money Laundering. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0661. Animal Law. 2 Credit Hours.**

This course will examine the moral, ethical and public policy considerations involved in balancing the interests of animals and humans. Topics include the treatment of animals as property, including animal custody in divorce; state anti-cruelty laws; the federal Animal Welfare Act; the use of animals in research; veterinary malpractice; tort liability for animal-inflicted injury; consumer fraud litigation against animal-related industries; and animal rights advocacy in the age of ecoterrorism legislation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0662. Drafting and Negotiating Real Estate Documents. 2 Credit Hours.**

This course, taught by two experienced practitioners, will study the skills necessary to effectively negotiate real estate transactions and to draft the related documents. Working in small groups, students will have the opportunity to develop those skills by negotiating a commercial real estate lease and by drafting the key elements of the lease and the ancillary documents.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0663. Special Education Law in the United States. 2 Credit Hours.**

This course will examine the foundation of special education in the United States; specific federal statutes that govern education of exceptional children; practical application of those statutes, specifically the importance of individualization of programming, how the procedures are designed to ensure that individualization occurs and what an appropriate IEP looks like;

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0664. Working Parents and the Law. 2 Credit Hours.**

This course will consider how the law impacts those who combine paid work with being the primary caregiver for their children. We will examine some of the various areas of law that impact such working parents, including Labor and Employment Law, Social Security Law, Tax Law, and Family Law. We will consider how our laws protect working parents as well as whether our laws encourage or discourage women, in particular, to combine paid work with motherhood. Additionally, this course will look at laws in other countries for contrast and comparison.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0665. International Criminal Law. 3 Credit Hours.**

Recent years have seen a rapid expansion in the international law dealing with atrocity crimes such as genocide and crimes against humanity as well as crimes committed in armed conflict. This course will study the evolution of international criminal law from Nuremberg to the present. The goals of the course are (1) to provide an overview of the main doctrines of international criminal law and procedure, including the definitions of crimes, modes of responsibility, and principles of procedure and punishment; and (2) to explore the advantages and disadvantages of prosecuting crimes of mass violence in national, international, and "hybrid" courts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0666. E-Discovery: Preservation through Presentation in the Digital Age. 2 Credit Hours.**

With computers and e-mail dominating business and personal life, the nature of civil discovery has changed. Lawyers need to know how to request, identify, preserve, collect, process, review and produce digital information, in all its myriad of forms (from e-mail and Excel to social media and the "Cloud"). While this does not require a technical degree, there are significant pitfalls that lawyers can learn to avoid and better represent their clients. This class is designed to teach law students about the nuances of the quickly evolving world of e-discovery and provide practical help so that students can be immediately valuable to their employers and clients.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0667. Commercial Litigation Strategy. 2 Credit Hours.**

The course includes case studies of categories of litigation and the types of relief that plaintiffs seek, including damages, injunctive relief, declaratory judgments, and class actions. Experienced litigators will be guest speakers. Students will be expected to read cases assigned and participate in class discussions. Generally, each class will have two separate segments. One segment will be discussion of the cases from the assigned reading, generally led by one of the students, subject to advance assignment. The discussion will focus on the contentions by counsel and the court's decision, with an emphasis on strategic objectives and alternatives. The second segment will discuss a general litigation topic, usually with a guest speaker. There is no exam. The grade will be based on class participation (20%), one short paper (20%), and one long paper (60%).

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0668. Advertising and Marketing Law. 2 to 4 Credit Hours.**

Businesses and other brand owners are constantly taking steps to market and advertise their products and services in ways that reach the targeted consumers and/or end users. Whether the platforms are television, radio, social media, apps, blogs, search engine advertising or highway billboards, many of the legal issues are the same. This course explores some of the major issues that businesses and other entities must consider when advertising and marketing products and services to the public. The course includes topics on false and deceptive advertising, defamation and other business torts, negative and gripe content, trademarks and copyrights, right of publicity, privacy, transmission tools (e.g., email, text messaging), promotions, and other relevant topics. The course takes a practical approach to these and other topics, and class discussions focus on current events and examples, to the extent feasible, to better apply the legal issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0669. Advanced Trial Advocacy (Speech Making). 3 Credit Hours.**

This performance based course will explore the art of speechmaking by focusing on the elements of what constitutes clear and persuasive speech in a legal context. It will consider the use of speechmaking in a variety of contexts that arise in legal practice (e.g., with individual clients and client boards, in negotiations and settlements, before judges, arbitrators, and mediators). Particular attention will be paid to the use of speeches in litigation. Principles of persuasion will be identified and analyzed in how they advance the three purposes of a speech: to entertain; to inform; and to persuade. Students will focus on preparing, organizing, drafting, using exhibits, quoting witnesses, explaining burdens of proof, incorporating judicial instructions, calling opponents on mistakes and misstatements, avoiding impermissible arguments and actual speech delivery.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0540 or JUDO 0461 (may be taken concurrently)) and (JUDO 0558 (may be taken concurrently) or (JUDO 0460 and JUDO 0461 (may be taken concurrently)))

**JUDO 0670. Tax Practicum. 2 to 3 Credit Hours.**

This course is open only to students who have had at least one course in Taxation and who have secured the consent of a member of the Tax Faculty. The specifics of the course will be tailored to the student's interests and proposed project but will in all cases involve some aspect of the practice of tax, regular discussion with the Professor, and written work product that requires the merging of tax theory with practice. Examples include but are not limited to, the establishment of a non-profit corporation, including the drafting of appropriate tax exemption documents, unpaid (internship) work at the Office of District Counsel of the Internal Revenue Service or Philadelphia City Solicitor, including drafting of legal memoranda or briefs and regular conferences with the Professor regarding the subject of such memoranda or brief, and including, at the discretion of the Professor, a paper reflecting on the experience or further analyzing a substantive issue arising from the experience. The Professor will be responsible for monitoring the quantity and quality of the work and ensuring that it is commensurate with the credits being awarded. Students may receive either 2 or 3 credits for the course. The course will not satisfy the Law School's Writing Requirement. Grading will be either a letter grade or pass/fail, at the discretion of the Professor and will be determined at the time of registration for the course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 0672. Low Income Taxpayer Policy and Practice. 3 Credit Hours.**

This course enables students to see first hand the effect tax policies have on low income taxpayers and then to process that experience through the lens of existing tax policy scholarship and commentary. Students will become certified as a volunteer preparers for VITA, the IRS's Volunteer Income Tax Assistance project, and will volunteer at a VITA center for a minimum of 4 hours per week during the last week of January, all 4 weeks of February, and two weeks in April. Class will meet once per week for 3 weeks in January, at least 2 weeks in February, 2 weeks in March, and 3 weeks in April. Students will be required to keep a journal in which they will describe the salient aspects of the returns they help to prepare. In addition, students will prepare a paper, not to exceed 6,000 words, in which they analyze their experience, taking into account the policy literature examined in class, and make recommendations for change. Students will present the ideas for their papers to the class and will lead a discussion thereof. The paper will not satisfy any portion of the law school's writing requirement. With prior approval, two or more students may choose to collaborate on the final paper, which has the potential to generate deeper, more meaningful papers. The grade for the course will reflect a combination of the quality of the journal postings, participation in class meetings, and the final paper.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0673. Taxation of S Corporations. 2 to 3 Credit Hours.**

This course provides an overview of the taxation of S Corporations and their shareholders. Over the past decade, S Corporations have been one of the fastest growing forms of business organization, even outpacing limited liability companies in terms of new entity formations. The taxation of S Corporations reflects a hybrid approach, blending corporate and partnership tax principles. Thus, this course will examine issues unique to S Corporations. Topics will include eligibility requirements, making and terminating the S Corporation election, operations and allocations, distributions, special issues involving historic C Corporations, and Qualified Subchapter S Subsidiaries.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0511 (may be taken concurrently) and JUDO 0523)

**JUDO 0674. PA Divorce Law & Practice. 2 to 3 Credit Hours.**

This course will thrust students into the role of new attorneys in a family law practice, with "hands-on" responsibility for every aspect of client representation. Several fictitious clients, with varying degrees of factual and legal complexities, will provide the setting for students to learn and practice interviewing, counseling, case management, negotiation and oral and written advocacy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0568.

**JUDO 0675. Prosecution in the 21st Century. 2 to 3 Credit Hours.**

The theme of this course will be the changing role of the prosecutor, from managing cases initiated through police activity to proactive problem solving, and attempting to reduce crime and recidivism through a more holistic approach. The course will start with a comparative evaluation of prosecution roles in other legal systems and the evolution of the American prosecutor, with particular emphasis on the wide latitude and discretion afforded American prosecutors.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0676. Legal Issues in Business Strategic Planning. 2 to 4 Credit Hours.**

This law school course will be structured as a simulation in which the students and instructor serve as a General Counsel's Office for EMC examining the legal issues that arise in helping businesses do strategic planning.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0677. Experiential Practicum. 1 to 15 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0680. Presidential Leadership and Individual Rights. 2 to 4 Credit Hours.**

Presidents are especially well placed to make constitutional law within their sphere of action, as well as to influence the development of rights in others' spheres of influence. In exposing students to writings from political science, history, law, and sociology, this interdisciplinary course has several objectives. First, students will examine the opportunities available to modern presidents to advance or erode constitutional, statutory, and human rights. Second, students will explore the social conditions - within bureaucracies and society as a whole - that must prevail for an administration to make the transformation of existing rights a priority. Third, taking on the perspective of an executive branch actor, students will assess the tactics available when a president is interested in taking action on a matter implicating individual rights: when is each strategy most tempting, what are the historical or legal precedents for each tactic, how effective is it, and so on.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0681. Public Advocacy for Social Change. 1 Credit Hour.**

In this 4-day intensive course, students will work intensively in teams to design and build an effective public advocacy campaign with multi-faceted deliverables. Among other things, students will identify a social problem, convince others to care about it in both written and oral form and develop a set of solutions to it. Students will identify stakeholders, targets, messages, and counter-arguments; testing ways to reach key audiences and measuring your success. Students will learn how to recognize effective marketing strategies; select a name for a campaign and build a brand that creates an emotional connection with target audience. Students will learn the craft of storytelling and how it can be leveraged to build a campaign in a fun and compelling way.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0684. Natural Resources Law. 2 to 3 Credit Hours.**

This course examines the law and policy related to the governance and management of natural resources in the face of competing demands for their preservation and use. The course will introduce the debate over resource valuation and will survey the statutory and common law regimes governing a variety of resources including public lands, water, wetlands, wildlife, forests, fisheries, and minerals.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0685. Oil and Gas Law. 2 to 3 Credit Hours.**

Development of natural gas from the Marcellus Shale formation has brought renewed interest in oil and gas development to Pennsylvania, West Virginia, and New York. This course will cover issues in conveying the mineral estate, relations between surface and mineral owners, relations among neighboring uses, environmental regulation at the state and federal level, local regulation and state preemption, moratoriums, considerations of cumulative impacts, and litigation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0686. Real Estate Development Law and Practice. 2 Credit Hours.**

This Course will detail the entire process of Real Estate Development from a legal perspective while reviewing the role of an attorney in the real estate development process and detailing numerous legal documents, governmental regulations, and major case law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0687. Strategy and Ethics in Trial Practice. 2 to 3 Credit Hours.**

This course takes students behind the scenes of two real trial lawyers' practices to look at real files of real cases that present real legal and ethical issues. It will demonstrate the practical application of abstract ethical and legal principles to real clients, causes, judges and counsel.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0688. The Role of In-House Counsel. 2 to 3 Credit Hours.**

This course focuses on the role of in-house counsel in today's technology and business driven world. Emphasis will be on: an interdisciplinary, broad-based approach, the ability to multi-task and to perform various types of legal work, and the many critical professional and legal issues uniquely faced by in-house staff.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0689. Franchise Law. 2 to 3 Credit Hours.**

This course will address the legal and business considerations of franchising; the role of franchising in the economy and the community; franchisor and franchisee relationships; federal and state regulation of franchise law; the disclosure and registration process; essential skill and knowledge sets in representing franchisors and franchisees; basic terms and issues in franchise agreements; intellectual property issues; antitrust issues; counseling prospective franchisors and franchisees.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0690. Energy Law and Regulation. 3 Credit Hours.**

The course will focus on the economic regulation of electricity and fossil fuel markets. Emphasis will be placed on how the Federal Energy Regulatory Commission (FERC) regulates price, service and competition in interstate markets under the Federal Power Act, the Interstate Commerce Act and the Natural Gas Act, and how state utility commissions, like the Pennsylvania Public Utility Commission regulate retail rates and services of electric and gas utilities, competitive commodity suppliers, and local gathering and pipeline transportation under analogous state laws. Constitutional principles governing the allocation of authority and the interplay between federal and state jurisdictions (dormant commerce clause, supremacy clause/preemption) will also be addressed. Grading will be based on one or more practice exercises, and a final examination.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0691. International Financial Law. 3 Credit Hours.**

This course will focus primarily on the legal aspects of international capital markets but will also include an introduction to the basics of project finance. No prior knowledge of finance is required. It will begin with a general overview of the architecture of the international finance system and some basic concepts in legal finance. We will then review three types of international business transactions; (i) loans; (ii) bond issues; and (iii) derivatives. As part of that review, we will examine the legal relationships and legal documentation necessary to effect such transactions and the kinds of legal issues (such as accountability for disclosure of accurate information, the risk of insolvency, the risk of asset freezes and related conflicts of laws) that commonly arise. Towards the end of the course, we will take a brief look at the legal aspects of project finance and evolving legal issues regarding carbon finance. Final class grades will be based on an exam, a mid-term team presentation and class participation. Class attendance is mandatory.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0692. Post-Conviction Remedies. 2 to 3 Credit Hours.**

The criminal appeals process provides prisoners the right to challenge their convictions in both state collateral and federal habeas corpus proceedings. This course introduces students to this important and rapidly changing post-conviction practice. We will examine what state-sentenced inmates must do in state court to preserve their right to pursue federal habeas relief before the federal district courts and courts of appeals under 28 U.S.C. § 2254 as well as address the habeas procedures set forth at 28 U.S.C. § 2255 available to federally-sentenced inmates. Students should have the opportunity to attend a state post-conviction evidentiary hearing and/or a federal habeas hearing and to meet with United States Magistrate Judges, who submit recommendations to United States District Court judges on how habeas corpus matters should be resolved. Students will learn about the types of claims that are successful in post-conviction, the complex interplay between state and federal proceedings, and how to overcome the many roadblocks the law has erected to bar federal court consideration of federal constitutional violations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0693. Informational Privacy Law and Compliance. 2 to 3 Credit Hours.**

This course will examine the fundamentals of informational privacy law across the United States and the globe. The course will also cover the design, implementation and operation of global privacy programs. The course will examine and evaluate the risks and benefits of global approaches to privacy as well as country or industry specific approaches to privacy. Finally, the course will examine corporate privacy policies, internal and external enforcement and reporting requirements, vendor management and data security breach management.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0695. Renewable Energy Law, Regulation and Policy. 2 to 3 Credit Hours.**

The course will cover solar and wind generation technologies and the issues involved in developing, siting, and integrating them into the U.S. electricity grid. The course will review the major renewable energy laws and regulations designed to promote renewable generation resources, including federal tax subsidies, state renewable portfolio standards, the Public Utility Regulatory Policies Act of 1978 and net metering. The class will consider the intermittent character of wind and solar resources, and the policy and legal aspects of possible ways to overcome this phenomenon. In light of the location constraints of wind resources, key regulatory issues affecting transmission access will also be addressed. Turning to the transportation sector, the course will consider vehicle electrification (widespread market integration of electric vehicles) as a strategy to reduce greenhouse gas emissions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0696. Introduction to Technology in Legal Practice. 1 to 4 Credit Hour.**

Technology used in the legal field is rapidly changing. Being competent in the use of technology is no longer an optional skill. Many states, including Pennsylvania, now require some form of technological competence as part of the Rules of Professional Conduct. This course will give students the foundation needed to use the common technology encountered in legal practice including time keeping, privacy and security, creating and managing secure documents, presentation technology, media literacy, legal analytics, and artificial intelligence. In addition to learning how to understand and evaluate these technologies, students will also get hands-on experience using many of these technologies. Students will also learn how to identify and evaluate any ethical implications related to the use of legal technology.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0698. Stakeholder Capitalism: Policy and Practice. 1 to 4 Credit Hour.**

This course will introduce students to stakeholder capitalism concepts in U.S. Law and Policy and how they are implemented. Furthermore, this course will equip future attorneys with the knowledge and practical skills to advise directors, officers, and business owners on how to meet their duties to shareholders and stakeholders.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0699. Economic and Community Development: Laws and Policies. 1 to 4 Credit Hour.**

Urban areas are key engines of regional and national growth. At the same time, they have emerged as disproportionate centers of poverty and inequality. This class will explore the history and context of community and economic development, with an emphasis on the economic revitalization of declining urban cores. This course is geared toward students interested in domestic economic development law, policy, and practice. The course will focus on Philadelphia and will touch on other cities. We will review case studies to understand the complex politics of urban economic development and students will critically reflect on the objectives and outcomes of local economic and community development efforts. Through reviewing landmark cases, statutes, and regulatory policies, the class will highlight the impact that national, regional, and state economic forces have on cities.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0700. Tort Litigation and Trial Practice (SEPTA). 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0540 (C or higher) and (JUDO 0460 or JUDO 0558)

**JUDO 0701. Death Penalty Litigation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0702. Business Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of D in JUDO 0508 and JUDO 0600.

**JUDO 0703. Public Interest Advocacy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0704. Temple Legal Aid Office: Family Law Litigation Clinic. 1 to 4 Credit Hour.**

The Family Law Litigation Clinic in the Temple Legal Aid Office provides direct legal representation to low-income litigants in child custody, child and spousal support, paternity and adoption cases. Student attorneys in the Clinic have the opportunity to handle all aspects of client's cases, including intake interviews, case selection based on merit, development of a case plan, drafting of pleadings, counseling of clients, negotiation with opposing counsel or parties, development of trial strategy, trial preparation and court appearances.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 5036.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0540 (C or higher) and (JUDO 0460 or JUDO 0558)

**JUDO 0705. Homeless Advocacy Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0706. Adv Civil Trial Advocacy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0707. Civil Litigation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0708. Collective Bargaining. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0709. Phila Vlntr Lawyers/Arts. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0710. Legislation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0711. Local Government. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0712. Consumer Legislation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0713. Small Claims Mediation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- in JUDO 0731.

**JUDO 0714. Criminal Defense Advocacy: Camden Public Defender. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0532 (D or higher), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0715. Environmental Law-Delaware Riverkeeper Network. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of D in (JUDO 0536 or JUDO 0684)

**JUDO 0716. Criminal Defense Advocacy: Defender Association of Philadelphia. 4 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0532 (D or higher), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0717. Federal Criminal Practice: Federal Defender. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0532 (D or higher), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0718. Criminal Litigation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0719. Criminal Prosctn: Camden. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0720. Criminal Prosecution: Philadelphia District Attorney. 4 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0532 (D or higher), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0721. Criminal Litigation Clinic: Montco DA's Office. 3 to 4 Credit Hours.**

Participants, after an intensive training period, will appear in various units throughout the Montgomery County District Attorney's Office as Certified Legal Interns on behalf of the Commonwealth. Students will be assigned to the pre-trials unit, where they will handle probation/parole violation hearings, summary appeals, and other miscellaneous pretrial hearings; the juvenile unit, where they will have the opportunity to work on misdemeanor and felony bench trials; the Family Protection Unit, where they will work closely with assistant district attorneys handling domestic violence and sex assault cases; and, the Narcotics/Firearm Units, where students will work closely with assistant district attorneys handling drug and firearm related cases.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0532 (D or higher), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0722. Law Education & Partcptn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0723. Vip-Negligence Litagatn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0724. Federal Criminal Practice: United States Attorney. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0532 (D or higher), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0725. Criminal Prosecution: Bucks County District Attorney. 4 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0532 (D or higher), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0726. Federal Judicial Clerkship. 3 to 6 Credit Hours.**

While traditional clerkship opportunities are available only to select law school graduates from the top of their class, Temple Law is proud to offer a unique federal judicial clerkship clinical for current law students. Students in Temple's prestigious Federal Judicial Clerkship Clinical Honors Program work for federal judges over the course of a full academic year and participate in the practical aspects of jurisprudence. Working alongside judges and their full-time clerks, students draft orders, research issues, prepare bench memoranda, and observe judicial proceedings. The program consists of eight to ten hours a week in chambers and a classroom component focused on the current issues impacting the federal courts. The classroom component of the course is taught by Judge Lawrence F. Stengel, United States District Court Judge.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C in JUDO 0540.

**JUDO 0727. Constitution Litigation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0728. Federal Criminal Practice: Health Care Fraud. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0729. Fed Civ Rts/Labor Law. 4 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0730. Elderly Law Project. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 5028 or JUDO 0591)

**JUDO 0731. Philadelphia Housing Court. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0732. Women Against Abuse. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0733. City Solicitor: Mntl Hlth. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0734. City Solicitor: Adoption. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0735. City Solicitor: Claims Litigation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0540 (C or higher) and (JUDO 0460 or JUDO 0558)

**JUDO 0736. Sexual Orientation and Gender Identity Law Practice. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0737. Criminal Prosecution. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0738. Temple Legal Aid Office: Domestic Relations Mediation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of D in (JUDO 0623, JUDO 0655, JUDO 0568, JUDO 1033, JUDO 0445, or JUDO 1035)

**JUDO 0739. Reprsntng Charitable Org. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0740. Temple Legal Aid: Bankruptcy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0741. Philadelphia District Attorney: Charging Unit. 3 Credit Hours.**

This external clinic will provide students with the hands on opportunity to work in the Philadelphia District Attorney's Office Charging Unit. In doing so, students will gain experience applying Pennsylvania law to real cases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0532.

**JUDO 0742. American Red Cross Southeastern PA Disaster Relief Clinic. 3 Credit Hours.**

Students will learn about disaster law and spend the semester gaining real world experience at the American Red Cross of Southeastern Pennsylvania.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0743. Medical-Legal Partnership Clinical Program. 3 Credit Hours.**

This clinical program provides an opportunity to work alongside lawyers who work in the healthcare setting as part of the clinical team. Focus is on delivery of legal services to low-income clients in an effort to address factors that impede good health (social determinants of health).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0540 (C or higher) and (JUDO 0460 or JUDO 0558)

**JUDO 0745. Federal Civil Rights Litigation under Section 1983. 2 to 4 Credit Hours.**

The course is intended to first teach students the basic federal constitutional and statutory doctrines necessary to litigate common current constitutional cases, specifically those arising under the Fourth, Eighth and Fourteenth Amendments, by briefly examining the initial discussions of Reconstruction and the enactment of the Civil War Amendments and, via simulation, revisiting Virginia's debate over whether to ratify the Constitution with or without an express provision protecting States' sovereign immunity. The course will then focus on the federal constitutional and statutory doctrines necessary to litigate Section 1983 actions through a series of in-class simulations which will cover Fourth Amendment claims arising out of police misconduct and other improper activities, Eighth Amendment prisoner claims, Fourteenth Amendment due process claims focusing on challenges to executive actions, and Fourteenth Amendment claims focusing on the fairness of procedures used when government deprives citizens of a protected interest. The course will also cover the doctrines necessary to understand and bring those claims against state and local governmental actors.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0748. Federal Appellate Litigation Clinic: Advanced Clinic Intensive. 2 to 4 Credit Hours.**

After having completed the Federal Appellate Litigation Clinic and Seminar, students will have the opportunity to continue their work on the client's appeal during the spring semester, including completing the briefing and presenting oral argument before the Third Circuit. In the advanced clinic, students will complete initial briefing, including finalizing and filing the principal brief, drafting a reply brief in opposition to appellee's/respondent's brief, negotiating settlements, and preparing and presenting oral argument before the Court. In addition, each student will participate in at least four moots as they prepare for argument; and draft three reflection papers, addressing the role of pro bono counsel in providing meaningful access to justice, effective appellate advocacy, and/or emerging issues in immigration and civil rights law. Students are also expected to participate in a weekly meeting with their faculty supervisor. There is no classroom component beyond what was taken in LAW 5037.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0759 and JUDO 5037.

**JUDO 0750. Immigration Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0751. Ethics in Practice. 1 to 4 Credit Hour.**

This course will focus on issues of professionalism and ethics in practice. Students will learn about attorney obligations to the client, court, profession, and society, and develop an understanding of their own professional values and philosophy as practicing lawyers. In addition to examining global issues of ethics and professionalism, the course will utilize students' experiences to identify and explore issues particular to different areas of practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0752. Pennsylvania Innocence Project. 3 Credit Hours.**

This clinical program offers students the unique opportunity to exercise their lawyering skills by reviewing and investigating actual claims of innocence on behalf of Pennsylvania inmates and, where appropriate, pursuing legal avenues for exoneration and release from prison. In the course of investigating factual claims and researching legal issues, students will review criminal files, interact with investigators, contact other attorneys, interview the client and witnesses, gather documentation and prepare legal documents and memoranda. Any court appearances will also involve students. The classroom component will cover topics including the definition of a claim of innocence, investigating and raising claims of innocence under Pennsylvania law, preservation of innocence claims for federal review, post conviction discovery rules, state and federal post conviction procedures and problems, investigative techniques and skills, the nature and uses of DNA and other scientific evidence and the state and federal rules governing admissibility of such evidence. Students will explore substantive and procedural issues in the context of their actual cases as well as discuss the ethical issues common to this area of practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D (except where noted) in JUDO 0532 and JUDO 0540 (C or higher)

**JUDO 0753. Consumer Bankruptcy Assistance Project. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0754. Domestic Violence. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0755. Domestic Violence: Philadelphia Family Court. 3 Credit Hours.**

This clinical course will first immerse students in how the legal system handles abusive situations. Students will: 1) study state and federal law concerning who, what and how actions can be brought and prosecuted, 2) have opportunity to observe proceedings in Family Court, and 3) have discussions with domestic violence advocates. Throughout the balance of the course, students will handle several cases referred by the main domestic violence programs in Philadelphia.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0756. State Judicial Clerkship. 3 Credit Hours.**

This clinical will provide a select group of students the opportunity to practice the tasks associated with judicial law clerks and observe and reflect on practitioners who appear in court. Students are matched with a judge in the First Judicial District. Students will apply their research and writing skills as they act as student law clerks, and will observe court proceedings and participate in a weekly seminar.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0757. Low Income Taxpayer Clinic (LITC). 2 to 4 Credit Hours.**

Experiential learning is designed to enhance traditional classroom instruction by engaging students in real life lawyering situations. This course will focus on developing professional skills, applying doctrine/theory to practice, and addressing ethical issues. Through their work, students will critically examine their learning strategies, goals and progress, and develop self-directed learning habits. Students will gain substantial legal experience including, advising, representing, and engaging in other legal issues on behalf of actual LITC clients.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 5067.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0758. Advanced Trial Advocacy: Online Advocacy and Technology in Trials. 1 to 4 Credit Hour.**

This course offers intensive training in the applicable law, strategy, skills, and techniques of online advocacy in hearings, as well as training in the use of courtroom presentation software. The course combines traditional lectures and demonstrations with learning-by-doing exercises. Students will have opportunities to conduct witness preparation, create visual demonstrations, conduct direct and cross-examinations virtually, and participate in an entire trial online. All of these exercises will allow the professors to provide substantial feedback and critique.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in (JUDO 0540 (D or higher), JUDO 0558, or (JUDO 0460 and JUDO 0461))

**JUDO 0759. Federal Appellate Litigation Clinic. 2 to 4 Credit Hours.**

Under the supervision of the professor, and consistent with Local Appellate Rule 46.3, third-year law students will handle appeals currently pending in the United States Court of Appeals for the Third Circuit. Students will provide pro bono representation to appellants in immigration appeals, habeas corpus proceedings, prisoner litigation, and other matters as appointed by the Court. The clinic will handle all aspects of representation for at least two existing appeals during each academic year.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 5037.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0550.

**JUDO 0760. City Slctr: Code Enfrcmnt. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0762. Criminal Litigation Field Clinic. 2 to 4 Credit Hours.**

This experiential live-client course provides students with the analytical thinking, case preparation, and litigation skills to successfully try a criminal case from Pre-Trial to Sentencing at the Montgomery County Public Defender's Office. After an intensive seminar during which students will be taught the following skills: litigation skills, effective client interviewing, brainstorming, discovery review, theory crafting, motion practice, plea-bargaining, cross-examination, and direct examination, students will observe court proceedings and then be assigned to a trial room in Montgomery County, Pennsylvania. Students will then conduct preliminary hearings and misdemeanor trials; interviews of clients, investigators and/or social workers; and appear in court. Students will also have the opportunity to work on a criminal justice related policy issue, most likely related to cash bail and probation and parole issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0763. Civil Rights for Inmates. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0765. Temple Legal Aid Office: Civil Practice for Clients with Health Care Issues. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0540 (C or higher) and (JUDO 0460 or JUDO 0558)

**JUDO 0766. Federal Estate & Gift Tax. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0767. Collective Bargaining. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0768. Community Legal Services. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0769. United States Attorney: Bankruptcy Unit. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0530 (D or higher; may be taken concurrently), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0770. Juvenile Rights Clinic. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0771. Consumer Legislation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0773. Corporate Social Governance. 2 to 3 Credit Hours.**

The course is designed to foster the acquisition of substantive legal knowledge and develop practical legal skills in the context of learning about core legal issues implicated by corporate engagements into social issues. In terms of substantive legal knowledge, the course will focus on legal issues relating to corporate governance, corporate social responsibility, corporate social activism, and shareholder activism. In terms of practical legal skills, the course will focus on skills related to legal communications and problem-solving in the context of various meetings, strategy sessions, presentations, and teamwork.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0774. Advanced Access to Justice Clinic. 2 to 4 Credit Hours.**

In the Access to Justice Clinic (JUDO 0790), students learn about the civil justice gap - i.e., the desperate shortage of legal help for most people of low and moderate incomes. Students who have completed Temple's Access to Justice Clinic can enroll in this course designed to provide an opportunity to complete advanced work on an access-to-justice project in a subsequent semester. In the Advanced Clinic, a small number of students will further develop an access to justice project, making use of the skills and knowledge they have acquired during the preceding semester.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D (except where noted) in (JUDO 0790 or JUDO 0790 (S- or higher))

**JUDO 0775. Advanced Clinical Intensive: Temple Legal Aid Civil Practice for Clients with Health Care Issues. 2 to 3 Credit Hours.**

Taken along with or after having completed Law 0765, students have a more comprehensive clinical experience by doing an additional project or more in-depth client work. Doing so, students can focus intensively on one or several aspects of skills training. Potential projects include developing a writing portfolio based on clinical cases, developing and/or staffing an interview site, handling extra client matters, and student developed initiatives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0765 (may be taken concurrently), JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0776. Temple Legal Aid Office: Advanced Family Law Litigation Clinic. 1 to 3 Credit Hour.**

Students who have completed the Family Law Litigation Seminar and the Family Law Litigation Clinic may enroll in the Advanced Family Law Litigation Clinic to continue to hone their family law practice skills. The expectation is that students enrolled in the Advanced Family Law Litigation Clinic will be asked to handle more complex matters in court and/or a higher volume of cases over the course of the semester. Students in the Advanced Family Law Litigation Clinic will continue to work in the Temple Legal Aid Office to provide direct legal representation to low-income litigants in child custody, child and spousal support, paternity and adoption cases.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0704, JUDO 0540 (C or higher), and (JUDO 0460 or JUDO 0558)

**JUDO 0780. Temple Summer Professional Experience Curriculum. 1 to 5 Credit Hour.**

Students will participate in an experiential learning program. An externship will be combined with a course of study designed to examine the role a lawyer has in society; obligations to clients, supervisors, public and self; definitions of success; moral judgment; and the formation of professional identity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0781. Social Justice Lawyering Clinic. 1 to 6 Credit Hour.**

Students will engage in the multifaceted practice of social justice advocacy through hands-on experience. Using a hybrid advocacy model, students provide direct individual client representation and work on related advocacy projects that address systemic issues. This work will be team-based and collaborative, and often involve nonprofit legal providers and community-based organizations. Students are expected to participate in a weekly team meeting with their faculty supervisor as well as learn about the substantive and procedural law that is applicable to their cases and projects. This course will focus on one or more particular social justice issues each semester.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0782. Advanced Clinical Intensive: Social Justice Lawyering Clinic. 1 to 4 Credit Hour.**

After having completed the Social Justice Lawyering Clinic and Seminar, students will have the opportunity to engage in a more in-depth clinical experience. They will work on a project that addresses systemic issues in team-based collaboration with community-based organizations. In addition, each student will: (1) provide leadership for a team of students; (2) produce a written portfolio with at least three different forms of non-traditional legal writing; and (3) write a paper that critically examines their role working as a student lawyer within a social justice movement.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0781 and JUDO 5034 (D or higher)

**JUDO 0783. Federal Reentry Court Clinic. 2 to 4 Credit Hours.**

In this year-long program, students assist STAR (Supervision to Aid Reentry) program participants, representing them in court under the guidance of supervising attorneys. Some of the legal issues that students have assisted participants with include: challenging arrears accrued on child support orders while incarcerated, adjusting child support payments, assisting participants to overcome barriers to employment such as help obtaining occupational licenses, challenging traffic violations, and screening and registering participants for benefits. The discrete issues on which the students work will be placed into a broader social justice context that explores such topics as mass incarceration, collateral consequences of incarceration, and restorative justice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0540 (C or higher) and (JUDO 0460 or JUDO 0558)



**JUDO 0784. Justice Lab Clinic. 1 to 6 Credit Hour.**

Justice Lab students represent client organizations (community groups, nonprofits, and governmental agencies) in a range of systemic advocacy matters. Students develop and advance policy campaigns, design legal services and access to justice programs, draft legislation and provide legislative advocacy tools, and act as legal problem solvers. Through this social justice advocacy, students find creative solutions to legal problems, reflect on the complex social and political aspects of the law, and develop strengths in interviewing, research and information gathering, policy, legislative, and strategic analysis, written and oral advocacy, collaboration, project management, professional ethics, negotiation, and media advocacy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 5052.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0785. Community Lawyering: Temple Legal Aid Office. 2 to 4 Credit Hours.**

Through community lawyering projects, this internal clinic at Temple's Legal Aid Office allows you to develop the legal skills you will need to represent clients in many areas of practice. As a legal intern, you will be placed in the primary lawyer role under the direct supervision of the professor who will supervise each aspect of the work you do. It is designed to be diagnostic--you will practice skills you need to lawyer and reflect with the professor at every step on how to practice well. Some skills you will develop include interviewing and counselling, goal defining with clients, legal analysis, legal research and writing, and oral advocacy. You will handle some litigation type matters, like administrative hearings before Administrative Law Judges to help people get disability benefits, and transactional ones, like drafting powers of attorney and wills. The present client base has a health law focus and includes people with physical disabilities and those with severe illnesses, like HIV and cancer. Many of the community sites focus on delivering medical and social services to people with these disabilities and illnesses.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0786. Big Tech and The Law. 2 to 3 Credit Hours.**

This course will cover fundamental legal and practical issues concerning large technology companies, including issues relating to corporate governance, privacy, competition, and social impact. The course is designed to foster the acquisition of substantive legal knowledge and develop practical legal skills in the context of learning about core legal issues implicated by large technology companies.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0788. Temple Law Asylum Project. 2 to 4 Credit Hours.**

Students will work in conjunction with the Washington Office on Latin America (WOLA), a preeminent research and advocacy nonprofit that works to advance human rights in the Americas, to draft annotated tables of contents tailored to specific asylum claims. This course will begin with a short overview of the asylum process in the United States and a breakdown of the legal elements of an asylum claim. Students will then learn various methodologies of country conditions research, and how to evaluate the accuracy and reliability of such research as well as the weight that immigration adjudicators will accord different sources. Working in teams, students will conduct in-depth country conditions research, some in Spanish, and compile that information into annotated tables of contents. Each annotated table of contents will be organized in accordance with a legal argument developed by its respective team. By using the annotated tables of contents as an organizational tool, students will learn how to tailor their facts through substantial, thoughtful, and careful editing to most effectively support their legal arguments. Students will gain a deeper understanding of the sociological, psychological, and ethical issues implicated in their work.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0790. Access to Justice Clinic. 2 to 4 Credit Hours.**

In this clinical course, students would engage in legal analysis and policy advocacy while representing client organizations seeking to achieve systemic improvements in access to civil justice - in the mechanisms, that is, by which currently unrepresented people can get access to legal help. Students would develop skills in working collaboratively with client organizations, project planning; interviewing; research and information-gathering; analyzing substantive law, procedure, and the actual working of administrative agencies and courts; identifying systemic barriers and developing solutions and strategies by which to achieve them; and written and oral advocacy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0791. Sheller Center for Social Justice: The Systemic Justice Clinic. 2 to 4 Credit Hours.**

A civil rights/social justice clinic focused on the collateral consequences of the criminal legal system will provide students an opportunity to address one of the most pressing concerns in civil rights today, that almost any interaction with the mechanisms of the criminal legal system results in a deprivation of a person's rights, and that these interactions and resultant deprivations fall disproportionately upon racial minorities and the poor. Michelle Alexander's "The New Jim Crow" draws an undeniable line from traditional conceptions of the struggle for civil rights to the modern carceral state and the treatment of incarcerated individuals. Complementing this understanding, James Jacobs has written convincingly on the concept of the "eternal criminal record", which can deprive people - even those with merely an arrest record - in the areas of housing, employment, and education for the rest of their lives. This clinic will give students a chance to work in an area of public interest law that is deeply textured, widely relevant, and profoundly rewarding.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0794. Advanced Clinical Intensive: Justice Lab. 1 to 4 Credit Hour.**

After taking the core Justice Lab clinic and seminar courses, some small number of students may wish to enroll in Advanced Justice Lab to continue their client advocacy and gain more in depth or complementary lawyering skills. In this advanced clinic option, students will continue their advocacy work for the same client as in the previous semester by pursuing further advocacy on the same or related issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- in JUDO 0784.

**JUDO 0795. Advanced Clinical Intensive: Community Lawyering Temple Legal Aid Office. 2 to 4 Credit Hours.**

Taken along with or after having completed JUDO 0785, students have a more comprehensive clinical experience by doing an additional project or more in-depth client work to supplement the clinical work of JUDO 0785. Projects are picked before the end of the first week of the semester.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- in (JUDO 0765 or JUDO 0785 (may be taken concurrently))

**JUDO 0796. Lawyering for the Indigent Intensive Clinic. 1 to 12 Credit Hour.**

This intensive clinic will provide students with basic instruction in law practice that will put together the substantive law and legal skills they have learned in law school in an intensive practice setting while they provide direct legal services to indigent clients. It is a capstone course which will allow students who have completed all of the rest of their coursework needed to graduate to spend their last 12 weeks of law school doing public interest legal work under the supervision of a fulltime clinical professor. It will meet the requirements of an alternate admission program established for the New York Bar, and may be modified as appropriate to accommodate students outside of that setting.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0800. Advanced Antitrust. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0801. Adv Con Law: Equal Protct. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0802. Adv Corporate Problems. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0803. African Customary Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0804. Education Law. 3 Credit Hours.**

This writing seminar will cover a range of legal and policy issues affecting elementary, secondary, and higher education. Specific topics will include rights of students, teachers, and parents; freedom of expression; privacy; academic freedom; school discipline; and equal opportunity.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0805. Employment Discrimination. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0806. Professional Responsibility. 3 Credit Hours.**

The purpose of this writing seminar is to explore what it means to be an ethical lawyer by discussing a range of issues facing legal professionals while acquainting students with some of the specific guidelines for ethical professional conduct. Emphasis is on the Model Rules of Professional Conduct, ethics opinions from bar associations, common law and statutory materials.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of D in (JUDO 0404 and JUDO 0410)

**JUDO 0807. Corporate Tax Planning. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0808. Health Care Law: Bioethics. 3 Credit Hours.**

This writing seminar examines bioethics as it applies to health care problems. Representative topics are: definitions of life and death; organ and tissue transplants; procreation problems; genetic counseling; abortion; sterilization; in vitro fertilization; surrogate parenting; wrongful birth and wrongful life; life and death decisions and medical experiments with human subjects.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0809. Collective Bargaining. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0810. Adm Pro: Grants/Benefits. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0811. Adv Evidence/Trl Tactics. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0812. Health Care: Reg & Financng. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0813. Law Economics & Morality. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0814. Comparative Criminal Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0815. Criminal Appellate Procedure. 3 Credit Hours.**

The major focus of this writing seminar is on the procedures and rights involved in the appeal of a criminal case. (Many of these procedures are similar to those in civil cases.) Attention is given to understanding the implication of appellate rules for the trial of a case. The role of the appellate courts, as well as of appellate attorneys, is also examined. That portion of the course dealing with prosecutor appeals affords an opportunity for an extensive examination of important aspects of double jeopardy. Some brief attention also may be given to various forms of "collateral attack" litigation and post-verdict trial" court motions. In lieu of an examination, students taking this course as a writing seminar will research and write a series of papers. Study of the course materials and participation in classes is also part of the process.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0816. Adv Crim Pro: Advocacy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0817. Law, Science and Technology. 3 Credit Hours.**

We will explore the interrelationship between law, science and technology and the role of science and technology in law by examining a series of specific problems. Examples include the legal ramifications of recent technological developments such as polygraph testing, clinical testing of new treatments on human subjects, cable television and the newest vehicle for mass communications, Internet, and fiber optics. Another issue that will be explored is the influence of new statistical and mathematical methods on the law. Students write and make a presentation to the class on a topic of their choosing.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0818. Comparative Law: Roman. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0819. Comparative Law: China. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0820. Adv Crim Procedure: Prblm. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0821. Insurance. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0822. Current Issues in Family Law. 3 Credit Hours.**

This seminar will be a small but ambitious step toward initiating a transactional family law program. The course will combine several basic substantive family law issues with several basic professional responsibility issues with several basic skill-based exercises. There will be two or three basic "problems". Each problem requires integrating substantive law with the rules of professional responsibility. Each problem requires exercising other basic lawyering skills, for example, client interviewing, intake processing, opponent attorney contact, negotiation, and client relations. The skill-based exercises for example, letters to clients, formalized agreements. As the course is currently planned, there may be a final paper requesting students to tie the other experiences together. As currently imagined, the course is very hands-on, relying on simulations to stimulate discussions and development.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0823. Adv Evidence: Scientific. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0824. Environmental Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0825. Corporate Finance. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0826. Land Use Law & Process. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0827. Legal Problems Small Bus. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0828. Adv Securities Regulatn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0829. Banking and Financial Reg. 3 Credit Hours.**

This writing seminar will provide students with corporate, regulatory, or litigation backgrounds with a rich understanding of the increasingly complex interaction between state and federal regulations (designed to promote efficiency, growth and fairness) and our nation's complex web of money moving institutions (banks, credit card companies, investment banks, S&L's, credit unions, brokerage houses, pay-day loan shops, etc.).

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0830. Comparative Antitrust. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0831. Computer Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0832. Consumer Problems. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0833. Selected Problems in Philosophy of Law. 3 Credit Hours.**

This seminar explores interconnections among legal concepts, history and political theory. Students interested in enrolling are encouraged to contact the instructor both for information about the reading list and to discuss potential paper topics.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0834. White Collar-Organzcd Crm. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0835. Appellate Advocacy. 3 Credit Hours.**

This writing seminar will provide an intensive study of the appellate process, brief writing, and oral argument. Topics will include theories of persuasion, argument development, and strategic considerations in brief writing and oral argument. Students will research, brief, and argue a case on appeal.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0836. Constitutional Litigatn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0837. Adv Constitutional Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0838. Counseling Internl Inves. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0839. Supreme Ct/Current Term. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0840. Legislation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0841. International Protection of Human Rights. 3 Credit Hours.**

This writing seminar is designed as an introduction to issues of law, policy and institutional machinery for the promotion of human rights in the world community. The course will focus first on 20th century genocide against the Armenians and Jews and then study the following problems: (1) Are nations bound by human rights laws (such as treaties, customary international law, U.N. Charter, European Convention, etc.). (2) Are the courts of a nation so bound. (3) Where there is violation of human rights law, when and under what circumstances may diplomatic intervention, economic sanctions and/or military force be used to redress the wrongs or to cause compliance with human rights guarantees.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0842. Drug Products Liability. 3 Credit Hours.**

This course develops an understanding the interrelationship between drug products liability, professional malpractice, and hospital negligence. This course will explore the evolution of therapeutic drugs and devices from the manufacturer's submission of the Application to the FDA through the approval of the Application to the marketing and prescription. The course will then explore the role of the FDA, pharmacists, physicians, and hospitals in the delivery of therapeutic drugs and devices to the consumer, and their respective obligations to the consumer. In that regard, this course will examine the federal Food, Drug, and Cosmetics Act, as well as many other complex legal and ethical theories applicable to drug and medical devices manufacturers, pharmacists, physicians, and hospitals in their therapeutic drug and devices interactions with the consumer. Currently publicized incidents such as problems with the Jesse Gelsinger gene therapy at the University of Pennsylvania, and others will be dissected within the context of both products liability and professional malpractice law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0843. Contrlling Noncompliance. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0844. Entertainment Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0845. Legal Advocacy Soc Chg. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0846. Business Torts. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0847. Environmental Law Problm. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0848. Cyberspace. 3 Credit Hours.**

The goal of this course is to introduce students, by means of a series of specific case studies chosen to illustrate the clash between existing legal regimes and new technologies, to a reasonably comprehensive subset of the legal problems that are being addressed as part of the developing "online law." Topics to be covered include the law of copyright as applied to electronic information, trademark law as applied to Internet "domain names," application of the First Amendment to the regulation of Internet communications, privacy concerns on the Internet, the law of anonymous communication and the regulation of encryption technology, and the difficult international jurisdictional questions presented by Internet activity. Although it is not a prerequisite, it is strongly recommended that students have had a course on intellectual property prior to enrolling in this course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0849. Food & Drug. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0850. Jurisprudence. 3 Credit Hours.**

This writing seminar will explore the question - What is law? - with special emphasis on the question of law's authority and on the relationship between law and morality. In the course of the semester, we will survey a variety of perspectives on the nature of law, including natural law, legal positivism, legal realism, law and economics, critical legal studies, feminist jurisprudence, and critical race theory.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0851. Jewish Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0852. Captl Pun. Life Imprism. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0853. Mental Health Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0854. State/Local Tax Finance. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0855. Introduction to Public Interest Law. 3 Credit Hours.**

This writing seminar is designed to explore major lawyering issues confronting public interest lawyers in a variety of practice areas. The course is intended to integrate academic theory with study of actual practice experiences in public interest advocacy. Students will discuss the assigned readings, interact with guest speakers, complete a research paper on an approved public interest topic, and present the paper to the class while it is still in draft.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0856. Adv Criminal Law:Prblems. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0857. Real Estate Problems. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0858. Select Prob in Evidence. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0859. State Constitutional Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0860. Tax Policy. 1 to 3 Credit Hour.**

This seminar examines selected aspects of federal income tax policy and enables students to explore the social and economic choices that underlie the tax system.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0861. Civil Disobedience. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0862. Copyrights. 3 Credit Hours.**

The goal of this writing seminar is to introduce students to the basics of US copyright law. Without detracting from this goal of covering the (domestic) copyright basics, we will also look at these issues in the specific context of these new technologies and the growing internationalization of copyright law, in order to introduce you to some of the problems that are likely to arise as copyright law enters the next century. Topics to be covered include the subject matter of copyrights, copyright ownership, the scope of copyright protection, the nature of the copyright infringement inquiry, the "fair use" and other defenses, and selected issues concerning the international enforcement of copyrights.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO 0863. Advanced Trial and Litigation Strategy. 3 Credit Hours.**

This writing seminar provides an intensive examination of the theory and practice concerning the examination of witnesses and the boundaries of "Relevant Evidence" with the primary focus on selected topics of impeachment and rehabilitation. The seminar is designed to provide an in-depth understanding of the trial process system from the perspective of the courtroom lawyer, an ability to perform certain trial skills within the ambit of witness examination and an analysis of both trial tactics and techniques as well as trial rules and procedures. Articles VI and IV of the Federal Rules of Evidence are studied in-depth and explored in their application to the courtroom experience.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0540 or JUDO 0461 (may be taken concurrently)) and (JUDO 0558 (may be taken concurrently) or (JUDO 0460 and JUDO 0461 (may be taken concurrently)))

**JUDO 0864. Intrnl Control Environmn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0865. Advanced Jurisprudence. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0866. Civil Rghts/Disabilities. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0867. Juvenile Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0868. American Legal History. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0869. Real Estate Dev Finance. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0870. Public Administration. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0871. English Legal History. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0872. Constitutional Law and Foreign Policy. 3 Credit Hours.**

This course explores the relationships of selected principles of constitutional law and adjudication with the conduct of U.S. foreign policy; especially from World War II to the present.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0873. Comparatv Nonprofit Orgs. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0874. Health Care Law: Medical Malpractice. 3 Credit Hours.**

This writing seminar examines the professional responsibility of physicians and other health care providers. Representative topics are: the professional patient relationship; quality control and risk management; standards of care; defense to malpractice actions; hospital patient responsibility; manufacturer patient responsibility; tort reform; medical evidence and damages.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0875. Estate Counseling. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0876. Bus Mergers/Acquisitions. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0877. Bus-Bankrptcy-Lit Ethics. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0878. Sports Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0879. Exclusionary Zoning. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0880. International Law Problems. 3 Credit Hours.**

This seminar will consider, within an interdisciplinary context, selective topics of international law. At the end of the semester, each student will submit an agreed-upon research paper on a subject within a topic such as: problems in foreign trade and investment; unilateral action by nations within international law; and the scope, reach of methods of anti-terrorist programs

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0881. Intl Investment & Trade. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0882. Products Liability. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0883. Complex Civil Litigation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0517.

**JUDO 0884. State/Local Government. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0885. Relational Torts. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0886. Constnl Torts & Remedies. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0887. Real Estate Transactions. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0888. Admnstrtn Crim Justice. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0889. Government Contract Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0890. Condominiums & Cooperatives. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0891. Law & Higher Education. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0892. Constnl Evolution-Africa. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0893. Adv Commerical Problems. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0894. Criminal Litigation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0895. Intl Commercial Transctn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0896. Multinational Enterprses. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0897. Persuasive Thinking. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0898. Comparative Law. 3 Credit Hours.**

A study of the origins, structure and distinctive features of the two main legal traditions of Western Civilization - the Civil Law and Common Law traditions - and their influences on selected national legal systems around the globe.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0899. Stigma and Deviance. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0900. Guided Research. 1 to 4 Credit Hour.**

This independent research offers students an opportunity to (1) satisfy the mandated writing requirement, (2) develop research, writing and analytical abilities through producing a single substantive research paper and (3) work with a faculty member in an area of the teacher's interest or expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0901. Guided Research II. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0902. Guided Research Serial. 1 to 4 Credit Hour.**

This independent research offers students an opportunity to (1) satisfy the mandated writing requirement, (2) develop research, writing and analytical abilities through producing a series of short papers and (3) work with a faculty member in an area of the teacher's interest or expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0903. Guided Research II Serial. 1 to 5 Credit Hour.**

Guided Research offers students an opportunity to develop research, writing, and analytical abilities. The student works with a faculty member in an area of the student's interest and the faculty member's expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0905. Temple Law Review. 1 to 3 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0906. Moot Court. 1 to 2 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0907. Intl/Compartv Law Journl. 1 to 3 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0908. Sci/Tech/Envrn Law Journl. 1 to 3 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0909. National Trial Team. 1 to 2 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0910. Poltcl/Cvl Rghts Journal. 1 to 3 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0911. Jessup Intl Moot Court. 1 to 3 Credit Hour.**

Jessup Moot Court is a co-curricular course offering. Students compete in teams and must produce written briefs and participate in oral arguments in mock appellate proceedings. Team members organize their own research, writing, and oral preparations with guidance from members of Temple's international law faculty, who serve as advisors. Temple Law competes against other U.S. law schools in regional rounds. In the international round, the winners of the U.S. regional competitions compete against teams from foreign countries who have won their own national competitions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 0912. International Law Colloquium. 3 Credit Hours.**

This course will examine select advanced topics in contemporary international law practice and scholarship. Approximately every other week, the course will feature scholarly presentations of papers or works-in-progress by leading international law scholars. Students will submit written critiques of the scholars' papers. This course satisfies the serial writing requirement.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0452, JUDO 0497, JUDO 0554, JUDO 0556, JUDO 0583, JUDO 0637, JUDO 0642, JUDO 0658, JUDO 0665, JUDO 0841, JUDO 0881, JUDO 0913, JUDO 0934, JUDO 0991, JUDO 0996, JUDO 0997, JUDO 1003, JUDO 1055, JUDO J637, JUDO J652, JUDO J991, JUDO R432, or JUDO R658)

**JUDO 0913. Treaties. 3 Credit Hours.**

The aim of this course is twofold. First, it will seek to acquaint students with the international law rules regarding the formation, interpretation and application of treaties, with particular attention to the 1969 Vienna Convention on the Law of Treaties. Second, the course will introduce students to the treaty law and practice of the United States, with particular attention to the distribution of authorities under the Treaty Power, Congress' role(s) in U.S. treaty-making, and judicial enforcement of treaties in federal and state courts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** JUDO 0556 (may be taken concurrently)

**JUDO 0914. Law of Investigations. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0915. Human Rights/Euro Union. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0916. Legal Ed/Practice of Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0917. Sexual Orientation, Gender Identity and the Law. 3 Credit Hours.**

This writing seminar will explore the intersections between American law and issues of sexual orientation and gender identity. The course will begin by encouraging students to think about what is meant by the terms "sexual orientation" and "gender identity," and how those identities relate to other legally-protected statuses. The remainder of the course will survey a range of substantive areas of American law in which issues of sexual orientation and gender identity arise. Students will be encouraged to reflect upon the theoretical underpinnings of sexual orientation and gender identity law, and also to creatively imagine how real-life clients presenting these issues might be served in different areas of practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0918. Law & Feminism. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0919. Crim Pro: Euro-Japan-US. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0920. Adv European Union Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0921. Law/Electronic Commerce. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0922. Derivative Securities and their Regulation. 3 Credit Hours.**

**Derivative Securities & Their Regulation:** This seminar provides an overview of what derivative securities are; how they are designed, risk-managed, and traded; how banks, corporations, insurance companies, pension plans, and other institutional investors can utilize derivative securities to enhance their profits or control risks; and how derivative securities are and can be regulated. This seminar analyzes legal aspects of an estimated \$600 trillion notional OTC (Over-The-Counter), or privately negotiated, derivative securities market. Some blame derivative securities for causing or at least contributing to recent economic crises. Topics covered include CDOs (Collateralized Debt Obligations), complexity, credit derivative securities, hedging, knowledgeable traders, noise traders, speculation, swaps, systemic risk, unsophisticated traders, and various regulatory proposals to reform our financial services industry. No prior familiarity with or knowledge of derivative securities is assumed or necessary.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0923. Intl/Comprtv Family Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0924. Fed American Indian Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0925. Japanese Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0926. Transactional Skills Workshop. 3 Credit Hours.**

This writing seminar will introduce students to the practice of business transactions law. Business transactions can, of course, take many forms, but most commonly involve either acquisitions or financings. "These are fancy words for "purchases" and "investments," respectively. Other transactions" include joint ventures, product development agreements, franchise agreements, licenses, and so on. This course is organized around two transactions: (i) the formation (financing) of an imaginary high-tech venture, and (ii) an asset purchase by that venture of another business. In addition to the skills component, students will be "expected to draft documents, maintain a "strategy" "journal," and complete several written assignments."

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 0927. Comnty Economic Devlpmnt. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0928. Intrnl Litgtn & Arbitrn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0929. Gaming Law. 3 Credit Hours.**

This writing seminar will explore the constitutional and statutory basis for gaming; the regulatory structure to license and control gaming; legal issues involving Indian, shipboard, charitable and internet gaming; and the rights of patrons and licensees who frequent and work in casinos.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0930. Crim Law-Changng Society. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0931. Human Rights/Jewish Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0932. Criminal Procedure II. 3 Credit Hours.**

Criminal Procedure II covers the main pretrial stages of criminal proceedings in felony cases, from pre-arrest to trial: prosecution decision whether to prosecute; bail and other forms of pretrial release; preliminary hearings; indicting and investigating grand jury proceedings; joinder and severance of defendants and offenses for trial; speedy trial, prompt commencement of proceedings, prompt trial statutes and rules; pretrial discovery; prosecution disclosure and preservation of exculpatory evidence; defense obligations not to conceal inculpatory evidence; and guilty pleas proceedings, including plea bargaining. The course deals with more "practical" procedure than Criminal Procedure I; the constitutional provisions and appellate decisions. The class is conducted predominately through role-play simulations, but also uses more traditional case analysis (mainly U.S. Supreme Court cases) and problem solving. In the simulations, students are assigned to conduct hearings, argue motions, etc., serving as judges, attorneys and witnesses. Some of the students not assigned to perform the simulation are assigned to write on the problem.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0933. Land Use Planning. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0934. Law of European Union. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0935. International Taxation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0936. Intl Employmnt Relations. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0937. Corp Law/Policy in Banking. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0938. Comparative Corporate Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0939. Adv Con Law: Con Theory. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0940. Patent Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0941. Trademarks/Unfair Comptn. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0942. Women and the Law: Domestic Violence, Rape and Harrassment. 3 Credit Hours.**

This course will focus on woman abuse, previously labeled battered woman syndrome. It will cover the causes of woman abuse and both formal and informal societal responses. Major emphasis will be on police involvement, evidentiary rules, substantive criminal and civil law doctrine, criminal and civil procedures, and avoidance and remedial measures. Some time will be spent on historical, sociological and international materials.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 0943. Constnl Lmts Reg Commrce. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0944. Legal Research and Writing III: Advanced Persuasive Strategies. 3 Credit Hours.**

This course will focus on advanced strategies for persuasion in legal writing. The reading in the course will focus on materials about the theory and practice of persuasion in law and other disciplines. The course will touch on such topics as storytelling and narrative, rhetorical devices, scientific advances in persuasion, and framing. Students will evaluate the use of the studied techniques in legal briefs and will practice using the techniques in their own writing.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0945. Advanced Legal Analysis. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0946. Law & Social Science. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0947. Environmental Law/Policy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0948. Health Med Law Socl Plcy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0949. Lawyering for Organiztns. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0950. Human Rights/Emergency. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0951. Com Law: Dispute Settlmnt. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0952. Law Justice & Morality. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0953. Comparative Constnl Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0954. Public Health Law. 3 Credit Hours.**

This writing seminar surveys the broad terrain of law and the public's health. We will cover both the "laws on the books" and the problems of actually implementing these laws in the often highly politicized and culturally sensitive context of health and behavior. Topics include the basic powers, duties and limitations of state health authorities in the United States; the epidemiological influence of law on health and health behavior; the global system of health governance; and the application of a human rights framework to health issues. Health topic areas covered include communicable diseases (HIV, SARS, emerging infections), tobacco, substance abuse, chronic diseases and infections. We will also devote considerable time to reading about and discussing how health is "socially constructed" and how stigma, economic self-interest and other cultural responses to disease complicate efforts to promote public health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0955. Dignitary Harms. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0956. Natl/Multicultural Rghts. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0957. Religion-Workplace/Socety. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0958. Law & Popular Culture. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0959. The Global Workplace. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0960. Privacy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0961. Ethical Perspectives on the Practice of Law. 3 Credit Hours.**

This course challenges the view that a lawyer is merely an instrument for achieving his or her client's ends and then examines the relationship between professional roles and ordinary morality. We ask whether the lawyer must take personal moral responsibility for (a) the quality of his or her relationship with the client, (b) the outcome of the cases s/he handles, and (c) the tactics and the strategies used to achieve the outcome. This is a serial paper writing seminar. Also, this course is not a substitute for Professional Responsibility and may be taken before or after that required course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0962. Federalism. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0963. First Amendment. 3 Credit Hours.**

This writing seminar offers an in-depth examination of the protections afforded by the First Amendment.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0964. Legislation and Public Policy. 3 Credit Hours.**

Through actual case studies, this serial writing seminar explores how legislatures translate controversial public policies (such as nondiscrimination laws) into specific legislation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0965. Religious Rights Under the United States Constitution. 3 Credit Hours.**

This course will examine the Free Exercise and Establishment Clauses of the First Amendment, with particular attention to the various approaches to their interpretation that the supreme court has pursued.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0966. Governing the Workplace. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0967. Sales. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0968. Theories of Property. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0969. Current Problems in Law and Medicine. 3 Credit Hours.**

The goal of this course is to provide students interested in health law with a unique opportunity to conduct research on current problems being faced in the field of health law. The student will gain practical experience through exposure to health care law practitioners working on problems confronting Temple University Hospital. Using this experience to select a topic and generate ideas, the student will then conduct guided research and write a paper under the supervision of the course instructors.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0970. Strict Liability-Products. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0971. Adv Administrative Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0972. Citznshp Immgrtn Refugee. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0973. Accounting for Lawyers. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0974. Civil Procedure II. 3 Credit Hours.**

The litigation process from the pleading stage through trial is thoroughly studied in this writing seminar. Areas covered in detail include: pleading, preliminary injunctions, motion practice, multi-party litigation, class actions, discovery practice and post-trial motions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0975. Death Penalty. 3 Credit Hours.**

This writing seminar will explore the law administering the death penalty in the United States. Four papers [one a month] of 7-10 pages will explore students' personal reactions to legalization of the death penalty, issues of racism, over inclusion, resources, effective assistance, retardation, youthful offenders and post conviction limitations on seeking relief.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0410 and JUDO 0532)

**JUDO 0976. Lender Liability. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0977. Corporate Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0978. Parents/Children/State. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0979. Affirmative Action. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0980. Equity in Jewish Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0981. Advanced Patent Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0982. Abortion. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0983. Advanced Immigration Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0984. National Security Law. 3 Credit Hours.**

This seminar will focus on a specific set of national security threats - those posed to the United States by non-state actors who target US civilians, personnel, and interests with the aim of achieving political change - and examine the legal controversies raised in responding to these threats domestically and abroad.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0404 and JUDO 0410)

**JUDO 0985. Unincorporated Business Associations. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0986. Law and Economics. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0987. Adv Case Law Methods. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0988. Legsltv-Regulatory Advcy. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0989. Law in Asia. 3 Credit Hours.**

This writing seminar will focus on both the comparative and international role of law in several Asian societies, including China, Japan, Taiwan and the Korean peninsula. We will compare the ways in which the different societies handle similar problems, and we will also consider the extent to which they are developing a kind of regional international law. Additionally, we will consider the degree to which convergence of cultures, economies and politics in East Asia is helping to promote convergence of law.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0990. Law Happiness & Meaning. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0991. International Development Law and Policy. 3 Credit Hours.**

This seminar examines high priority areas in international development aid and the legal issues that arise in connection with them. We begin with a discussion of the meaning of development and the role of governments, international organizations, civil society and the private sector in development. We then examine the legal and policy aspects of development in the context of specific needs, such as HIV AIDS, education, the environment and microfinance. We focus, particularly, on the legal questions that arise in building collaborations between donors of international development aid to address these needs and the different legal instruments used to provide such aid. No prior knowledge of development or development law is required.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0992. Conflict of Laws. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0993. Constitutional History. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0994. Race & Ethnicity. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 0995. Family Law: Theory, Policy and Practice. 3 Credit Hours.**

This writing seminar is designed to investigate the available theories for facilitating "family transition" through the process of separation or divorce and evaluate the extent to which the current practice by lawyers, courts, and related professionals facilitates or undermines successful transitions. There will be a particular focus on families with children and low income or moderate income families, and will include judicial as well as alternative dispute resolution techniques. Students will consider both economic issues following separation and divorce as well as child custody issues. Students will be required to work in teams to develop a research plan and produce individual scholarly written work that encompasses the following areas of research: 1) Identifying legal, psychological, and sociological theories concerning family transition that focus on reducing risks for all family members associated with separation and divorce, 2) "Real world" research that maps and evaluates the resources available to separating and divorcing families, including legal, mental health, court, and alternative dispute resolution procedures in the five county Southeastern Pennsylvania area, 3) Identification of key policymakers that would be in a position to implement policy proposals. Students will be encouraged to share their research findings with key policymakers.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0568, JUDO 0445, or JUDO 0455)

**JUDO 0996. Post-Conflict and Transitional Justice. 3 Credit Hours.**

This seminar will explore the legal, moral, social, and political questions that face societies emerging from periods of large-scale human rights abuses. We will study the various strategies that societies have adopted in recent history to recover from war, ethnic conflict, apartheid, and authoritarian rule. Such strategies include prosecutions, truth commissions, reparation programs, institutional reforms, and reconciliation programs. Each student will engage in a substantial research project that describes and analyzes a specific case or problem in transitional justice and explores how that case or problem fits into the larger themes examined in the course. Students will present their research to the class and will be responsible for reading and reacting to the work of their classmates.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0997. International Health Law. 3 Credit Hours.**

This writing seminar examines the many treaties, institutions and customs that govern how health is protected and promoted in the international system. Specific topics will include communicable disease control (e.g., SARS), chronic disease control (Framework Convention on Tobacco Control), international human rights and health, access to medicines (e.g., the TRIPS Agreement), the institutional structure of global health governance (World Health Organization, Global AIDS Fund), and health-related business regulation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 0998. Current Issues in Civil Rights Law. 3 Credit Hours.**

This writing seminar covers the federal regime for protection of civil rights, with a particular focus on (1) emerging or unresolved issues in civil rights law and (2) the broader historical and sociological background underlying federal civil rights statutes and doctrines. Reading assignments (subject to change) will cover Critical Race Theory; the debate over affirmative action; Titles VI and IX (prohibiting discrimination based on race/ethnic origin and gender in programs receiving federal funds, respectively); sexual orientation; and racial profiling.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 0999. Anatomy for Litigators. 3 Credit Hours.**

This course explores the medical/legal issues related to personal injury claims. In addition to discussing human anatomy from a litigator's perspective, the course will examine issues related to theories of liability and defense, expert testimony, diagnostic tests, medical records, and HIPAA.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1000. Trial Team - Pretrial Motions. 1 to 2 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1001. Trial Team - Evidence and Strategy. 1 to 2 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1002. Psychology and the Law. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1003. Refugee Law and Policy. 3 Credit Hours.**

This writing seminar will provide an introduction to international and domestic refugee law and policy. Beginning with an overview of the origins of modern international refugee law and policy, the course will then move into a basic background of the asylum process in the United States. We will next engage in an in-depth discussion of the doctrine of American asylum law, walking through the relevant elements laid out in asylum law and focusing particularly on areas of doctrinal growth. The course will also introduce students to the standard for claims to protection under the Convention Against Torture. We will then focus on detention of asylum seekers, reading both case law and policy papers. After this grounding in the American asylum system, the course will step back to examine international issues in refugee protection, including temporary and subsidiary protection, internally displaced persons, and durable solutions. We will wrap up with a discussion of challenges facing the American and international refugee law regimes in the future.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0550, JUDO 0583, or JUDO 0841)

**JUDO 1004. Law and Human Behavior Colloquium. 3 Credit Hours.**

This colloquium course will bring in leading scholars to present papers on legal, policy and regulatory implications of different conceptions of human behavior. With the recent explosion of research about how people behave in various contexts, environments, settings and situations, the goal of this seminar is to expose students to this recent research, with an eye toward its application in legal regulation and doctrinal development. There will be outside speakers every other week presenting their current research and its applications. Students are to read these papers before their authors present them, and write a brief two to three page reflection/response paper for each speaker before that speaker's presentation. These assignments will provide students with opportunities to critically evaluate, reflect upon and think carefully about what they have read. In the "off weeks" students will be provided material that provides background on the coming week's topic and instructors will lead discussion to enrich students' responses.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0508, JUDO 0530, JUDO 0525, JUDO 0825, JUDO 0486, JUDO 0986, JUDO 0690, JUDO 1011, JUDO 0958, JUDO 0480, JUDO 0590, or JUDO 0600)

**JUDO 1005. Intl/Rsltn Armed Conflict. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1006. Political and Civil Rights. 2 to 4 Credit Hours.**

Civil rights and individual freedoms under the First and Fourteenth Amendments are examined in this writing seminar. Topics include Congressional enforcement of the Civil War Amendments, racial discrimination in schools, housing and employment, sex discrimination, national security, libel, obscenity, access to the media, government surveillance and the right of privacy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 1007. Climate Change Law and Policy. 3 Credit Hours.**

Global climate change is threatening to cause severe, widespread and possibly catastrophic changes to our planet. This seminar will consider the implications of climate change for domestic and international law and policy. International negotiations are scheduled to take place in Copenhagen in December 2009, climate change legislation is pending in Congress, and the EPA is poised to begin regulation of greenhouse gases under existing law. How should such legislation be designed in order to accomplish the radical restructuring of the U.S. economy that will be necessary in order shift energy production away from our current heavy reliance on fossil fuels? Should it employ a carbon tax, a cap-and-trade system, or some other regulatory mechanism? How should the costs of transitioning to the new "green economy" be allocated? Should the poor receive subsidies to offset rising energy costs? How might an international agreement to reduce global greenhouse gas emissions be structured to be both politically feasible and fair? Should such an agreement impose costly emissions reduction obligations on developing nations that are already struggling economically, when the problem has been primarily caused by those in the developed world? Who should pay the costs of adapting to those adverse effects of climate change that have already become inevitable - effects that are likely to fall most heavily on the developing world? In the absence of a unified regulatory approach at either the federal (U.S.) or international level, how have advocates already begun to use existing legal structures to try to force action on climate change? We will address these and other questions in the seminar with the help of readings drawn primarily from books and scholarly articles. Students will write a series of short papers over the course of the semester based on the readings and will take an active role in facilitating class discussions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1008. Developing Children's Rights. 3 Credit Hours.**

The seminar will cover the following topics: 1) Childhood as a Legal Status . This segment of the course, joined with the next, act as foundation for identifying the basic legal problem in developing the constitutional rights of children; 2) Children as Family Members. This is focused on fleshing out the legal relationship between parents and children; 3) Children as Victims and Witnesses. This segment of investigates one of the dominant tensions in our system: children victimized by the very people assigned to protect them; 4) Children as Students and Agents. Here again, children are assigned to 'protective' environments that are sometimes hostile or unsupportive; 5) Children as Patients, Consumers, Litigants. This is a catch all, following from the highlighted 'agency' element of the school focused material; 6) Children as Offenders. This segment will be structured to consider the ways in which we hold children responsible for their choices even as otherwise characterizing them as incompetent deciders; and 7) Children as Citizens. This is designed to contain material on regulations directed at children like curfews, underage drinking, and gambling prohibitions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1009. The Jury. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1011. Law, Emotions and Neuroscience. 3 Credit Hours.**

This writing seminar provides a survey of practical and theoretical aspects of how emotions and neuroscience affect legal rules and institutions. It addresses roles that emotions and neuroscience can, do, and should play in theories and practice of law. Emotions and neuroscience raise profound and interesting questions central to jurisprudence such as these: How do emotions like anger, anxiety, compassion, fear, disgust, guilt, happiness, love, mercy, remorse, resentment, and shame influence the decision-making and judgment processes of judges, juries, lawyers, legislators, litigants, and voters? How and should law take into account evidence based upon brain imaging and scanning technology? How do emotions and reason interact and influence decision making? How are different emotions processed by human brains? Which brain systems regulate which emotions? This course focuses on legal and public policy implications of recent neuroscience research about how emotions influence financial decision making over time and under conditions of risk, strategic interaction, and employment discrimination. Finally, this course addresses how emotions and neuroscience are related to addiction, creating and developing social and institutional structures, criminal and personal responsibility, ethical issues, meaning in our lives, and moral development. This course does not presume any prior formal study of emotions or knowledge about neuroscience, yet it should also be challenging to students with substantial backgrounds in the study of emotions or neuroscience.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1012. Crimes and Immigration. 3 Credit Hours.**

This writing seminar will focus on the growing intersections between criminal law and immigration law, with a primary focus on immigration consequences of criminal convictions. The course will begin with an introduction to deportation and removal, and the specific criminal grounds for removal. The remainder of the course will focus on related topics such as immigration detention, applicability of criminal procedural rights in immigration proceedings, right to counsel, retroactivity, terrorist bars, victims of crime, and potential relief from removal despite convictions. This course is intended for students with an interest in either criminal or immigration practice, or both.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1013. Selected Issues in Federal Criminal Law and its Enforcement. 3 Credit Hours.**

Students will examine the provisions of particular Federal statutes including the Racketeer Influenced and Corrupt Organizations Act (RICO), the Hobbs Act, the Mail and Wire Fraud statutes, anti-money laundering provisions, the Official Bribery and Gratuities acts and Conspiracy laws. This course will explore the rationale and appropriateness of the choices made by Federal authorities to investigate and prosecute certain offenses--particularly when there is clear, State statutory authority to proceed. Policy issues to be examined will include the viability of the existing emphasis upon an anti-supply strategy in the Federal effort to contend with the abuse of drugs and narcotics in the United States. The current form of the Federal anti-terrorism program and the impact of the elevation of Intelligence activities by the Federal Bureau of Investigation with its effects upon traditional Criminal law enforcement will be reviewed. Each student is expected to produce a major research paper of publishable quality as a basic requirement of the Seminar. 50% of each student's final grade for the course will be based upon the quality of the written product and the remaining half of the course grade (50%) will be based upon the instructor's assessment of the student's contribution to the quality of the discussion during the weekly meetings of the Seminar.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0410 and JUDO 0532)

**JUDO 1014. Emerging Trends in Labor Law. 3 Credit Hours.**

This seminar will examine recent developments in labor law, most of which are occurring in the shadow of the classic NLRA regime. Among other topics, we will likely study workers' efforts to organize via privately-negotiated recognition agreements; state and local governments' efforts to promote or deter collective bargaining; and the particular challenges faced by immigrant and other non-traditional workers. Throughout, we will also consider the broader constitutional and economic issues raised by such developments, and will ask how labor law should adapt to modern workplaces more generally.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0562.

**JUDO 1015. LRW III: Civil Motions Practice. 3 Credit Hours.**

This writing seminar is designed to provide an in-depth understanding of the primary pre-trial motions used during the course of civil litigation, including: 1) motions to dismiss/preliminary objections, 2) discovery motions, 3) motions in limine, and 4) Frye/Daubert motions challenging expert testimony. Both the Pennsylvania Rules of Civil Procedure and local procedural rules governing motions practice will be examined. Emphasis will be placed on the purpose behind the various motions as well as how to effectively draft those motions for use in civil litigation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1016. Modern Depositions. 3 Credit Hours.**

An examination of the legal, practical and skills dimensions of modern depositions. Topics to be covered: case theory for deposition practice; taking and defending depositions for fact gathering, for preservation of testimony, and for obtaining admissions; taking and defending entity representative, expert witness, and theory testing depositions; use of video recorded depositions; and party and non-party witness preparation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0517 and JUDO 0540) and (JUDO 0558 or (JUDO 0460 and JUDO 0461))

**JUDO 1017. Privacy in Employment Law. 2 to 3 Credit Hours.**

The purpose of this writing seminar is to explore employer and employee expectations regarding privacy in the workplace and the role of emerging technology. Topics of discussion will include pre-employment inquiries and screening, workplace investigations, monitoring of off-duty behavior, computer usage and data privacy protection.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1018. Immigrant Low Wage Workers in a Global Economy. 2 to 3 Credit Hours.**

This writing seminar will examine the laws governing employment relationships and the exclusion of certain classes of workers from worker protection statutes. In particular, we will explore the employment realities of low wage workers, and examine the growth of contingent employment arrangements and their implications for workers' rights and efforts to strengthen them.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1019. Citizenship in Legal and Theoretical Perspective. 2 to 3 Credit Hours.**

This seminar examines how political communities accept, reject, and expel individual members as citizens, and how citizenship law defines and reflects national identity. The course considers how citizenship is acquired at birth, and what requirements are imposed on naturalization applicants. It also considers in what circumstances the government can deprive an individual of citizenship; the special problems of dual nationality; historical racial and gender aspects of citizenship; the special context of terrorism; and the status of non-citizens and the extent to which they can be legally disadvantaged, as for instance with respect to public benefits and political participation. The course also considers the meaning of citizenship beyond the nation-state, including local, indigenous, regional, and global citizenship. The course will pursue critical perspectives on citizenship, drawing from constitutional, statutory, comparative, and international law sources.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 1020. Legal and Clinical Approaches to Healthcare. 2 to 3 Credit Hours.**

This course provides students with an in-depth analysis of U.S. health policy and the impact on access, safety, quality, and efficacy of health delivery. Students will also be asked to review pertinent cases affecting health care practices as well as legislation affecting the profession. Included is a study of appropriate health care practices and their connection to the law. A major emphasis will be placed on safety in the delivery of health care.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1021. Tax Policy and Administration Colloquium. 1 to 3 Credit Hour.**

In this course students will read and comment on contemporary scholarship in tax policy either while the scholarship is still a work in progress or shortly after its initial publication and be able to discuss their comments with the author, who will present the work to the class. Scholarship will include work to be published in law reviews as well as other forms of contemporary scholarship.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 1022. Foundations of International Criminal Law. 2 to 3 Credit Hours.**

This is not a basic course in international criminal law (ICL), which typically examines the crimes that constitute ICL, modes of liability, characteristic defenses, the tribunals involved, and the bases for assertions of jurisdiction by those tribunals. Rather, this writing seminar previews that more systematic analysis of ICL by addressing a number of constitutive issues, which are grouped into four broad topics regarding issues of: Definition, Universalism, Criminal Responsibility, and Transitional Justice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1023. Legislation and Regulation. 3 Credit Hours.**

This seminar introduces students to the central role of legislatures and administrative agencies in the current legal and social landscape, addressing how statutes and regulations are generated, changed, and interpreted by the legislative, administrative, and judicial arms of government within U.S. federalism.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1024. Chinese Law. 3 Credit Hours.**

This seminar provides students with an understanding of the Chinese legal system.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1025. Law and Public Policy II. 3 Credit Hours.**

Law & Public Policy II is an upper level seminar with an individualized writing component, focusing on legislative and regulatory reform. Students receive individualized one-on-one instruction while participating in collaborative work that encourages information sharing. Students must complete a scholarly article that is suitable for submission to law reviews. All students are also required to present their papers at a professional conference or comparable setting with an accompanying PowerPoint presentation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO W910.

**JUDO 1026. Access to Justice in Civil Matters. 3 Credit Hours.**

This seminar will explore the extent to which the American legal system provides access to civil justice for people of low and moderate means.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 1027. Innocence and Wrongful Convictions. 3 Credit Hours.**

This seminar provides students with an overview of the issues and case law related to wrongful convictions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410 and JUDO 0532.

**JUDO 1028. Legal Research and Writing III: Civil Litigation. 3 Credit Hours.**

Using a hypothetical medical malpractice action venued in the Philadelphia Court of Common Pleas, students will learn about, and produce, work product in four broad categories of communications: (1) drafting to the client; (2) drafting to opposing counsel; (3) drafting to a demanding supervising partner; and (4) drafting to the Court.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in ((JUDO 0540 (D or higher) and JUDO 0558) or (JUDO 0460 and JUDO 0461))

**JUDO 1029. Advanced Financial Regulation: Corporate Scandals and Crises. 3 Credit Hours.**

This seminar examines the legal and practical considerations surrounding selected corporate scandals and crises. Additionally, it aims to develop and foster substantive legal knowledge and practical legal skills among its participants.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 1030. Forensic Evidence, Science, and Medicine. 3 Credit Hours.**

Through a Murder Mystery that unfolds during the semester, this course will explore how cases are pieced together through the collection of evidence, crime scene assessments, and forensic analysis as students create and analyze a murder book to help solve the homicide. Through real life experiences and lectures by experts in the field, this course will discuss the legal issues involved in forensics from eyewitness identification to polygraphs.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1031. The Science of Legal Persuasion. 3 Credit Hours.**

This course introduces modern scientific knowledge about how people make judgments of fact and values, and trains the student to apply this knowledge to the lawyer's core task of persuasion.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1032. Comparative Family Law. 3 Credit Hours.**

This course examines various countries' family laws in light of key comparative law debates, including the legacies of colonialism and the role of globalization; changing definitions of "family" and borrowing across legal systems; migration for marriage and adoption; the role of culture and religion in defining family law codes; and the influence of human rights law. The course will also address, to a lesser extent, the treatment of family law in international law and by multinational courts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1033. Families in Law and Public Policy. 3 Credit Hours.**

This writing seminar is designed to provide the opportunity to learn to be an effective advocate to improve public policy on behalf of children and families. Students will engage in interdisciplinary research regarding legal issues directly affecting children and families in areas such as divorce and separation, child custody and support, adoption and child welfare. The course will look at theories for how law and policy may undermine or support families and the many different approaches to reform. It will consider issues related to socio-economic status, race, religion and ethnicity in the law's relationship to families. It will also consider practices of lawyers and courts in relationship to families and children. We will focus on gaining the skills to (1) identify areas needing reform; (2) conduct research into the problem requiring reform; (3) analyze research to propose solutions to the problem; and (4) effectively represent clients. The course will require both oral and written communication individually and in groups.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1034. Disability Law and Policy. 3 Credit Hours.**

In this writing seminar, students will explore laws designed to protect and assist people with disabilities. The course will look at laws to provide income and health insurance support including Social Security, Medicare and Medicaid; laws designed to help people with disabilities to enter the workforce and the community, including the ADA and other civil rights laws; and laws designed to protect people with disabilities in the community, including guardianship, criminal justice, and civil commitment laws. The course will focus on how each area of law is shaped by a different conception policy makers have about who people with disabilities are and how the law can help. Students will compare these and struggle with the ways people must fit into each definition to get help under the law, and will come to understand disability laws and what must be done to access them effectively.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1035. Custody Law. 3 Credit Hours.**

This seminar covers the entire field of custody, including the following: History of custody in America; Constitutional implications; Definitions and general principles including joint custody; Psychological issues from the parent's point of view, from the children's point of view and from the lawyer's point of view; Child custody evaluations; Best interest standard and the factors affecting that standard; Paternity related presumptions and rights of third parties, including the state, grandparents, stepparents and relevance of in loco parentis and different burdens of proof; Abuse; Interstate and International Child Custody Disputes; Relocation; Termination of parental rights; Dependency; Adoption; Methods of resolving custody disputes, including negotiation, mediation and litigation; Post-decision proceedings including modification of orders and appeal and contempt; and Special topics including surrogacy, biological or psychological parents and biotechnology issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 1036. Low Income Taxpayer Policy and Practice. 2 to 3 Credit Hours.**

This course enables students to see first-hand the effect tax policies have on low income taxpayers and then to process that experience through the lens of existing tax policy scholarship and commentary. Students will become certified as volunteer preparers for VITA, the IRS's Volunteer Income Tax Assistance project, and will volunteer at a VITA center of their choice for a minimum of 35 hours during the semester. Class will consist of two parts. During the first part, students will share their experiences preparing low income taxpayer returns, specifically linking what they are seeing in the returns to the scholarship they have read for the class. During the second part they will discuss the specific reading assigned for that class. Students will also produce a series of at least four short papers in which they will offer their reflections on their tax preparation experience and the ways in which it does, or does not, connect with the policies reflected in the scholarship they have read. At the end of the course, students will develop a project, present the project to the class, and write a final paper describing the project. The course will be graded, reflecting a combination of the quality of the periodic reflection papers, participation in class meetings, and the final presentation and paper.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO 1037. Advanced Employment Discrimination. 3 Credit Hours.**

This writing seminar will provide an in-depth exploration of the theory and proof structures of federal employment discrimination law, with an emphasis on exploring how the law should develop in the future.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0537 (may be taken concurrently) or JUDO 0625 (may be taken concurrently))

**JUDO 1038. Comparative Corporate Governance. 2 to 3 Credit Hours.**

This seminar will involve in-depth analysis of several major problems in the governance of large corporations, and the ways that power relations operate among the major constituencies of the modern corporation (shareholders, directors, officers, and other stakeholders). To give students a grounding in corporate governance, the course will initially focus on issues raised in the context of U.S. publicly-traded corporations, but as the semester progresses it will introduce particular governance problems and solutions presented in other legal systems.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0508 or JUDO J508)

**JUDO 1039. Race and the Law. 2 to 3 Credit Hours.**

The seminar goal is to understand the role of the law in creating and perpetuating systems of racial privilege and discrimination in the U.S. from the colonial period to the present. It will also critically examine the effectiveness of race-conscious remedies. The course will cover issues related to African Americans, Asian Americans, Latinos/as, and American Indians.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1041. Poverty Law. 2 to 3 Credit Hours.**

Students will study what poverty looks like in the U.S. and how law addresses the needs of the poor and otherwise affects them. They will look at both laws specifically designed to alleviate poverty and its impact, like welfare, housing, and health care laws, and laws that have a disproportionate impact on the poor, like criminalization and some discrimination law. A particular emphasis will be placed on whether specific laws are in sync with policy goals. Second, students will consider what policy and litigation strategies are being tried presently to alter how things currently are and think about others that could be used. Students will be asked to design their own strategies and through several serial writing papers, will create a short white paper on the topic.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404 and JUDO 0410.

**JUDO 1042. Legal Research and Writing III: Experts in Civil Litigation. 2 to 3 Credit Hours.**

This writing seminar is designed to train upper level students in how to effectively use experts at trial and to prepare the various documents and other filings that accompany expert testimony. Topics will include: how to retain and investigate experts, qualifications and the admissibility of expert testimony, the scientific or technical reliability of the proposed testimony, methods for effective presentation of expert testimony, cross-examination techniques, and ethical issues surrounding the use of experts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in JUDO 0540 (D or higher) and (JUDO 0460 or JUDO 0558)

**JUDO 1043. Legislation and Public Policy. 1 to 4 Credit Hour.**

Learning at the intersection of law, politics, and policy, students will explore - through writing and presentations - how legislatures translate controversial public policies into specific legislation. Students will also explore the avenues of how policy can be manifested beyond the immediate passage of legislation, intersecting with the role of the executive branch and the courts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1044. Advanced Legal Research. 2 to 3 Credit Hours.**

This seminar is designed to strengthen student research and legal analysis skills through a detailed and comprehensive examination of key legal research resources, with a particular focus on advanced legal research methods and strategies. It teaches students to better evaluate and select sources, develop and implement appropriate research strategies, and conduct effective and efficient research on a range of complex legal topics.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1045. Reproductive Health, Rights and Justice. 2 to 3 Credit Hours.**

This seminar will explore how the law shapes reproductive decision-making through a variety of mechanisms designed to regulate and control sexuality, bodies, and family relationships. Course materials pose challenging questions about the role of government institutions, economic systems, and social structures in influencing or impeding the realization of reproductive rights.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO 1046. International Investment Law and Arbitration. 1 to 4 Credit Hour.**

This course will examine critical legal and policy issues facing the investment treaty regime in a time of sustained economic globalization and populist backlash. The basic principles and policies underlying international investment law will be introduced, including the allure of investor-state arbitration as a means for investment protection. Students will examine and critically assess arguments that investment law undermines human rights protections, discourages legitimate health and safety regulation, and protects polluters while hindering effective responses to climate change. Students will discuss the connections between international investment protection, economic development, and national security. Finally, students will assess proposals to reform or revolutionize the investment treaty system. Students will connect these discussions to broader and timely themes concerning globalization, the rise of populist nationalism, and the future of the global economy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0556.

**JUDO 1047. Internet Law. 2 to 3 Credit Hours.**

The goal of this course is to introduce students, by means of a series of specific case studies chosen to illustrate the clash between existing legal regimes and new technologies, to a reasonably comprehensive subset of the legal problems that are being addressed as part of the developing "Internet law."

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1048. Ethical Perspectives on Law. 2 to 3 Credit Hours.**

This course is about different visions of moral responsibility in law. We will examine a variety of concepts, including "neutral partisanship," accountability, fault, causation, and justice. In addition to conventional legal materials, we will use literary works to probe these ideas.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1049. Advanced Topics in Contract Law. 2 to 3 Credit Hours.**

This seminar surveys the empirical literature on contracts and contracting. It is organized around three questions, which will serially recur in the readings: (1) What terms are in contracts, and why? (2) When do firms or individuals pay attention to terms (if ever)? (3) How do individuals and firms respond to contract terms? That is, rather than approaching the field of contracts from the typical doctrinal or economic perspectives, we will proceed more pragmatically, using sociology and psychology to develop models of how agreements are formed and order relationships.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0406, JUDO J406, or MLAI C406)

**JUDO 1050. Law, Legal Theory, and Global and Local Food Systems. 2 to 3 Credit Hours.**

Debates about how food is produced and distributed are often debates about the structure of economic exchange - and thus also debates about the legal rules that govern markets. This seminar uses the production and distribution of food to study the role of law in economic development. We will begin this seminar with history - specifically a history of law and development that traces shifts in dominant ideas of law and development over the twentieth century. We will then study three global shifts in the structure of agricultural production, distribution and trade that roughly parallel this historical periodization. Throughout this investigation, we will ask how law and legal theory shapes food systems and facilitates their transformation and, in turn, how food law and food systems have contributed to development and, sometimes, baffled or misdirected it, producing a great deal of inequality and suffering in their wake. We will look at specific areas of food law and policy including trade liberalization, food aid, land (land reform and land grabs), and biotechnology. We will end the seminar with hopeful contemporary case studies on topics including fair trade, food sovereignty, and food cooperatives. Here, we will pay particular attention to how different actors use law to challenge economic concentration and inequality in global and local food systems and thus how these actors promote particular ideas of social and economic justice and market reform.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1051. Environmental Compliance and Enforcement. 2 to 3 Credit Hours.**

This seminar will introduce students to the environmental law framework in the United States, key federal environmental statutes, various enforcement models built within those statutes, and the theories behind compliance. The course will also briefly touch upon federalism and the relationship between federal and state agencies.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1052. International Compliance. 2 to 3 Credit Hours.**

This course will survey key compliance challenges facing corporations operating in a global environment. A case study method will be used to explore regulatory regimes in the United States and key foreign jurisdictions that impact international corporate operations, including (i) antitrust/cartel questions, (ii) corruption, (iii) market manipulation, (iv) trading with certain countries, and (v) data privacy. In doing so, compliance issues at all stages of corporate operations will be considered including both ex ante issues (i.e., structuring effective policies, procedures and programs to avoid compliance issues in the United States and abroad) as well as those that arise ex post (i.e. dealing with allegations of non-compliance and remediating any violations found). Also considered will be the liability risks of not only the corporation itself, but also corporate managers and directors (in both their professional and, occasionally, their personal capacities) alongside the risks for third parties who fail to implement and oversee reasonable compliance programs.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1053. Mindful Lawyering: Techniques for Effective Counseling, Negotiation and Advocacy. 2 to 3 Credit Hours.**

This course is designed to accomplish two primary goals. First, to teach students mindfulness practices and to explore how those practices can enhance their effectiveness in various lawyering skill areas. These include the ability to: (1) listen to, counsel, and work effectively with, clients; (2) identify and deploy negotiating strategies that maximize value for all parties; (3) mediate conflicts; (4) advocate for desired legal and social outcomes; (5) develop leadership skills; and (6) maintain balance and focus in high stress professional environments. The second major course goal will be to teach students effective legal researching and writing techniques.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1054. Regulating Cyberthreats. 2 to 3 Credit Hours.**

This course will explore how law, including domestic and international law rules on cybercrime and international law rules applicable to cyber warfare, regulates cyberthreats. It will also analyze current debates over the appropriate forms of international governance of cyberspace and explore how law might be used to regulate the prospects of cyberterrorism.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1055. Treaties and Negotiations. 2 to 3 Credit Hours.**

Treaties have long served as one of the several sources of international law. Increasingly, they have come to serve as the dominant source, regulating almost every aspect of international affairs, from bilateral, one-time deals between States to multilateral agreements that aspire to law-like status. This course aims to consider the treaty from three perspectives. First, it examines the treaty concept, using historical, theoretical and functional materials to assess this instrument's role in international relations. Second, broadly following the structure of the 1969 Vienna Convention on the Law of Treaties – 'the treaty on treaties' – it examines the life-cycle of treaties from their inception to their termination. Third, it examines how domestic legal systems regulate treaty-making using the U.S. system as a case study. Taken together, this course considers what treaties are alongside the modern law and practice on their formation, application, interpretation, and termination. Students will write a paper examining a topic related to treaties and will participate in an in-class exercise involving the negotiation and adoption of the text of a treaty.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1056. Legal Research and Writing III: Judicial Opinions; Critical Drafting and Analysis. 2 to 3 Credit Hours.**

This course has two primary goals. First, students will learn a process for drafting judicial opinions, including the development of legal reasoning and authority to support their conclusions. They will read materials on how to write judicial opinions and will study judicial opinions to deconstruct their components. Second, students will learn how to view law and judicial opinions from a variety of diverse perspectives and learn to integrate critical legal theory into their legal reasoning and opinion drafting. They will read legal theories that critique law and read judicial opinions that incorporate those legal theories into the law. By focusing on gender, race, class, sexuality, economic class and masculinity, the course requires a desire to learn a new style of writing, a willingness to be deliberate and conscious about how to write law, and an open mind.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1057. Toxic Chemical Regulation. 1 to 3 Credit Hour.**

This seminar will introduce students to some of the most important broad policy issues raised by the regulation of toxic chemicals, first investigating how these issues have been confronted in the past by regulatory schemes in Europe, the states, and under the old federal law, and then exploring the new regulatory scheme that the EPA is currently constructing under the new statute (the Frank R. Lautenberg Chemical Safety for the 21st Century Act). Writing assignments would be practice-oriented and may include, for example, comments on currently pending regulations that could actually be filed with the EPA.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1058. Lawyering for Entrepreneurship. 1 to 3 Credit Hour.**

This writing seminar will introduce students to the practice of business transactions law. Business transactions can, of course, take many forms, but most commonly involve either acquisitions or financings. These are fancy words for "purchases" and "investments," respectively. Other transactions include joint ventures, product development agreements, franchise agreements, licenses, and so on. This course is organized around two transactions: (i) the formation (financing) of an imaginary high-tech venture, and (ii) an asset purchase by that venture of another business. In addition to the skills component, students will be expected to draft documents, maintain a strategy journal, and complete several written assignments.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0508 (may be taken concurrently) or JUDO J508 (may be taken concurrently))

**JUDO 1059. Current Issues in Cyberlaw. 1 to 3 Credit Hour.**

This course is a practical course in which students will apply cyberlaw to pseudo clients. Legal cyberlaw principles involved in electronic transactions, defamation, data breaches, identity theft, hacking, cryptography and encryption, cyberprivacy, cybersecurity, cybercrimes, national security, electronic surveillance, virtual currencies, the deep and dark web, among other current cyberlaw issues will be studied.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1060. Internet of Things. 1 to 3 Credit Hour.**

The Internet of Things (IoT) is the common name for the emerging world of everyday objects such as wearable technology, personal devices, medical electronics, appliances, homes and cars being linked to each other through the Internet. They collect large amounts of data that is stored in cloud platforms and communicated to other devices and to other parties. They provide revenue for businesses that sell data collected from IoT devices. Additionally, they provide developers, governments, researchers, investigators, hackers and others access to analyze information in different ways. This course examines the legal, policy, and technology issues of these and other expanding aspects of IoT, focusing on how lawyers can be integral to the course of IoT development.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1061. Payment Systems. 1 to 3 Credit Hour.**

This course focuses on modern consumer payment systems, and the rules, laws, and regulations that govern them. We will look at payment instruments commonly used by consumers - credit cards, debit cards, prepaid cards, and checks - and will discuss the ways in which payments are authorized, cleared, and settled. We will also examine the ways in which consumers who use electronic payment systems are protected. In addition, we will discuss emerging payment instruments, privacy concerns, and policy considerations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1062. How to Run for Office. 2 to 3 Credit Hours.**

This 3-credit semester long writing seminar will help students learn and practice the elements that would make for a successful candidate in a run for office or a valuable addition to any campaign team. Students will learn about the intricacies of an election, campaign finance law, learn how to build a campaign plan and team, learn how to analyze your constituency, and develop a clear and convincing campaign message. Come to this course and articulate your beliefs about the role of government, make a ten-minute stump speech outlining your plan for your team, and develop a detailed legislative strategy for your first day in office. Learn the history of democratic politics in the United State and how to successfully join the many lawyers who have run for office.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1063. Special Education Law-US. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1064. International Trade Law. 2 to 3 Credit Hours.**

This course focuses on the law of international investments and trade policy and covers the nature of the international investment transaction and the various forms of regulation thereof. The course will also consider national governmental policies dealing with trade and the restriction thereof.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1065. Scientific and Statistical Evidence. 2 to 3 Credit Hours.**

This course will explore the ways in which scientific and statistical evidence is used and evaluated in civil and criminal legal proceedings today. We will introduce the principles and regimes governing the admissibility of evidence of a scientific or technical nature and discuss the underlying policy choices. We will discuss cultural and social contexts in which forensic disciplines have been developed and used in court; interactions between legal and scientific cultures that arise in this context; the roles played by experts, juries, and judges; and scientific, judicial, and lay perceptions of scientific material presented in court. Examining in more detail a number of forensic techniques that have come under scrutiny in recent years will allow us to delve deeper into some of the central questions in scientific evidence today - What makes scientific evidence reliable or unreliable? What is the line between "junk science" and admissible evidence? How might experts and data be biased, and how might courts and litigants detect and correct for those biases? - and engage in a broader debate about the role of science in adjudication. Finally, we will assess proposals to reform or radically overhaul the manner in which scientific and statistical evidence is used in courts today, drawing on both domestic proposals and foreign approaches.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0540.

**JUDO 1067. Asylum at the US-Mexico Border: Resistance and the Rule of Law. 1 to 4 Credit Hour.**

This course will examine federal policies that limit the right to seek asylum at the US-Mexico border and impact litigation challenging these policies. Students will examine the role of the federal court in protecting the rights of asylum seekers at the border and will also explore the role that practices such as accompaniment, human rights monitoring, and popular rights education play in resisting these policies at the border. This course will also examine federal and state responses to resistance, including the criminalization of migrants and human rights defenders. This course will examine case studies and emphasize practice skills in movement lawyering, human rights monitoring, and impact litigation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0550 (may be taken concurrently) or JUDO 1003 (may be taken concurrently))

**JUDO 1068. International Human Rights of Children. 2 to 3 Credit Hours.**

This introductory course will expose students to contemporary children's rights issues. Students will learn the sources of substantive and procedural rights of children under international law. Students will explore the evolution of children's rights by reviewing international declarations and conventions of the rights of the child, culminating with the U.N. Convention on the Rights of the Child and its optional protocols on children in armed conflict and on the sale of children, child prostitution and child pornography. Students will learn about mechanisms for monitoring children's rights, through the state (country) committees and the U.N. Committee on the Rights of the Child. Students will also learn about complaint procedures through the third Optional Protocol on a Communications Procedures (which addresses matters such as exhaustion of remedies). Students will read case studies addressing issues such as the death penalty for children, access to education, and the use of child soldiers. Over the course of the semester, students will become familiar with international children's rights standards, as well as opportunities - and limits - for advancing children's rights.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1069. ICC Moot Court. 1 to 4 Credit Hour.**

ICC Moot Court members are selected after the first year of law school to participate in an inter-scholastic appellate competition involving law school students from other schools. ICC Moot Court members engage in research, writing, and/or oral advocacy projects designed to learn International Law through a case file.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1070. Citizenship: Race and Immigration. 2 to 3 Credit Hours.**

This course will examine how shifting racial legal categories are a critical factor in constructing citizenship. The course will focus on intersectional rights, justice, and liberation through the prism of historical, contextualized, and modernized immigration law, enforcement, and politics. Course discussions will analyze identity issues such as race, class, gender, immigration status, and sexuality. Specific doctrinal areas of law covered in this course include Constitutional Law and Criminal Law to advance student understanding of how our legal system and governance impact marginalized communities in the United States.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1072. Gender Equity in the Legal Profession: Issues and Solutions. 2 to 3 Credit Hours.**

The course will focus on biases (explicit and implicit) against women in the legal profession. The course will examine forms of bias (e.g., Confirmation Bias, Prove-it-Again Bias, Tightrope Bias, Motherhood and Workplace Bias), and the difficulties of combatting implicit bias because it is often subtle and hidden. The course will also cover the impact of implicit biases. This will include unequal representation in various fields of and roles in practice (e.g., the underrepresentation of women as first chairs at trial, lead negotiators, and patent and IP practice, just by way of examples.) It will also examine the impact of these biases in, e.g., performance evaluations, access to mentoring, high-quality assignments, networking opportunities, fair pay, promotions, as well as being mistaken for administrative staff and/or asked to perform "office housework." The course will then focus on an analysis of methods to combat or "interrupt" biases. This portion of the course will focus on solutions, including institutional best practices, the importance of allies and mentors, grit and growth mindsets, and the ways law, regulatory regimes and ethical rules can be utilized to bring about change. The course will conclude with studies in leadership, equipping students to recognize and seize opportunities to manage their own professional journey and to level the playing field for everyone.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1073. Law of Investment Management. 2 to 3 Credit Hours.**

Law of Investment Management is an introduction to the primary federal statutes and administrative regulations that govern investment advisers and investment companies (primarily mutual funds but also introducing other types of registered and private investment funds). This course will focus on the Investment Advisers Act of 1940, the Investment Companies Act of 1940, the regulations promulgated by the U.S. Securities and Exchange Commission thereunder, and selected judicial opinions and SEC guidance interpreting those statutes and regulations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1079. IP Moot Court. 1 to 4 Credit Hour.**

Intellectual Property Moot Court members are selected after the first year of law school to participate in an inter-scholastic appellate moot court competition involving other law school students. IP Moot Court Competition Team members engage in research and writing assignments and/or oral advocacy projects. Students will learn about intellectual property law through a case file that is developed as part of a moot court competition.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1080. Legal Research Writing III: Legal Drafting Seminar. 3 Credit Hours.**

Drafting is an essential experience in your preparation for the practice of law. This course presents a unified approach to developing the drafting skills that span different categories of legal documents. Students will learn how to solve a client's problems and to accomplish a client's goals through legal drafting. The primary emphasis will be on drafting statutes and contracts. However, students will also learn drafting principles that apply to other public rules (constitutional provisions, codes, ordinances, administrative rules/regulations, executive orders, and court rules) and private documents (leases, covenants, bylaws, and settlement agreements).

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1081. Innovation Law and Policy. 2 to 3 Credit Hours.**

This course will examine how law and policy affect, and are affected by, innovation and scientific/technological advancement. To understand the relationship between law, policy, and innovation, we will focus on several ways in which innovation, law and policy interact with one another. This course will begin by reviewing certain laws and policies that were developed to promote innovation and technological development. While this course will explore certain concepts revolving around biotechnology, genetics, and neuroscience, students do not need a background in science to take this course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO 1082. Combating Counterfeiting and Piracy. 2 to 4 Credit Hours.**

This course is designed to progress as a case study in which the students will initially review a client intake memorandum and investigative report. Students will next develop and present a strategy to their client for combating the illegal activity; students will also present their strategy to relevant government agencies for approval. Next, the students will implement their strategy through assembling their evidence, identifying the appropriate defendants, statutes and jurisdictions for prosecution of their claims, and preparing and arguing motions seeking the desired relief, as well as organizing execution of the same upon the defendants. Through this course students will consider various ex parte civil litigation tactics and strategies available to intellectual property owners for combating illicit trade and supporting both civil and criminal remedies.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.



**JUDO 1083. Child Abuse and Sex Trafficking of Minors. 2 to 3 Credit Hours.**

This course is designed to provide an introduction to tort actions involving child abuse and sex trafficking of minors in the United States. During the first half of the semester students will discuss the legal landscape of the child welfare system, including definitions and signs of abuse, the mechanics of state intervention, the role of agencies and mandatory reporters. The second half of the course will focus on the sex-trafficking of minors, highlighting sex trafficking as a subset under the larger human trafficking landscape. Students will discuss state and federal anti-trafficking legislation, profiles of victims and perpetrators and special considerations when taking a minor trafficking case to court. Students will also explore policy and ethical considerations relevant to sex-trafficking civil litigation including the efficacy of third-party liability in preventing the abuse and trafficking of minors.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1085. Law and Global Development. 2 to 4 Credit Hours.**

This course will deal with past and present debates over the role that law and legal institutions play in international development. We will examine various aspects of the relationships among economic ideas, legal ideas, and development policies pursued at national and international levels, with an emphasis on trade, global supply chains, and the roles of international organizations such as the World Bank and the International Monetary Fund. The course will introduce students to diverse methodologies, including economics, law, critical studies, and other disciplines to understand the successes and failures of globalization and development initiatives over time and across countries.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1086. Diversity, Equity and Inclusion in the Legal Profession. 2 to 4 Credit Hours.**

This course explores why diversity, equity and inclusion (DEI) are core competencies in the practice of law and in the administration of justice. This course will examine the history and current state of the legal profession in terms of representation by people from historically underrepresented groups, including women, racial and ethnic minorities, LGBTQ+ individuals, and people with disabilities. The course will also explore the role of individuals, institutions, and systems in perpetuating discrimination and injustice. The course will also examine the moral and business case for DEI and the impact of current and historical events on DEI.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1091. Private Equity and Hedge Funds. 2 to 3 Credit Hours.**

This course explores the role of private fund investors in global financial markets today. This course will focus on hedge funds and two types of private equity investors: venture capital and buyout funds. We will discuss the structure of private funds and investment strategies of private funds. We will also gain an understanding of private fund transactions and will focus on venture capital transactions involving portfolio companies. We will also discuss the regulatory environment for private fund investors, including with respect to the Securities Act of 1933, the Investment Company Act of 1940, the Investment Advisers Act of 1940, and other relevant laws and regulations. We will discuss a number of other issues of current interest in the private fund arena, including issues related to diversity and inclusion and the role of pension fund investors in the private fund arena.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 1093. Current Issues in Patent Law. 1 to 4 Credit Hour.**

This course will focus on the most important patent cases pending before the Supreme Court and the Federal Circuit and may also examine cases pending before the federal district courts, the Patent Office, and the International Trade Commission. Students will learn about various issues, which may include personal jurisdiction in patent cases, venue in patent litigation, design patents, claim construction, post-grant challenges at the Patent Office, patent cases at the International Trade Commission, and infringement damages.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0940 (may be taken concurrently), JUDO 0552 (may be taken concurrently), or JUDO 0547 (may be taken concurrently))

**JUDO 1094. Race and Gender Equality in Commercial Law, Markets and Business Organizations. 3 Credit Hours.**

This seminar focuses on the intersection between race and gender issues and commercial/corporate law, business organizations, and product markets. Sections will include: examining the impact of race and gender issues on regulated industries, markets, and public corporations; exploring how commercial law regimes (such as bankruptcy, tax, housing, banking) impact race and gender equality; the use of data analysis to support or reject claims of race and gender bias in organizations and transactional markets.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1095. Mergers and Acquisitions - Advocacy to Antitrust Authorities. 2 to 3 Credit Hours.**

Future litigators, antitrust specialists, corporate attorneys and bankers stand to benefit from an appreciation of how antitrust affects deal-making, how the regulatory process works, how transactions with substantial competitive overlaps might be approved on the basis of creative advocacy, and what mergers may be possible now and in the future in a dynamic competitive environment. In this experiential learning course, students will analyze the competitive implications of potential transactions, study the Department of Justice Merger Guidelines, conduct industry research, draft memos setting forth antitrust arguments to the agencies, and develop a presentation for the purpose of demonstrating that a proposed transaction will not lessen competition and should be allowed to proceed.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1097. Race, Health, and the Law. 1 to 4 Credit Hour.**

This course will provide students with an opportunity to explore the connections between the social concept and embodiment of race, public health, and law. The course will include extensive readings in legal history of race and the social epidemiology of health inequalities and inequities, but will be structured to rely on the students to make sense of what is important in that history to their own agendas for personal and collective legal action.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1098. Artificial Intelligence Law. 2 to 4 Credit Hours.**

Artificial Intelligence (AI) attempts to replicate human intelligence in a machine so the machine can perform tasks that typically require human intelligence. Based on the capacity to mimic human characteristics, the technology used, the real-world applications, and the theory of the mind, AI is focused into goal-oriented abilities designed to perform specific tasks, or AI abilities that are in parity with human abilities, or AI abilities that are more capable than a human. Lawyers are presented with issues related to: autonomous vehicles; medical devices (e.g., microchip implants in humans, ingestible pills), medical diagnosis, and health/medical care; reducing energy use; improving cybersecurity; new methods of climate and environmental protection; a safer society; "deep fakes" used to spread disinformation; bias in AI analysis and its impacts on marginalized groups (e.g., employment, setting bail, and criminal sentencing); AI and Intellectual Property (IP) (AI as inventor or author, and IP protection for AI); AI and social media, especially with respect to data mining and privacy concerns; AI in law practice and law firm management; implications of AI for employment; AI and legal decision-making for claims for benefits such as social security disability or workers compensation; and AI affecting finance, transportation, national security, advertising, and a variety of other fields. The governance of AI is aimed at ensuring AI's numerous potential benefits while minimizing risks to consumers' health, safety, security, and privacy is only beginning. Lawyers, policymakers, and risk management professionals must address governance issues with respect to development, deployment and use of AI applications.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1099. Empirical Analysis and the Law. 2 to 4 Credit Hours.**

In many areas of law and law-making, attorneys are increasingly called upon to evaluate and present empirical evidence to support their claims. Fortunately, the majority of empirical research today uses only a handful of research methods. In this seminar, you will learn about these methods and the types of legal questions that they can address. The goal of this seminar is not to equip students to become producers of empirical research, but rather, to help students become better consumers of empirical research and in so doing, build an important set of skills for legal practice. There is no special preparation or background in empirical methods necessary for this course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1102. Law and Justice: International Literary Perspectives. 2 to 4 Credit Hours.**

What is justice? One important component of justice is a decision made according to a rule, rendered by a neutral, impartial decision-maker. But the rule of law ideal does not exhaust our conceptions of justice. When rigidly applying rules seems unduly harsh, justice may consist of showing mercy. Or an occasion might seem to require an empathetic rather than an impartial decision-maker. And, sometimes, focusing on results rather than on procedure is important. Drawing upon literature--short stories, novels, plays--from several countries, this course will examine competing images of just outcomes and procedures. Through in-class discussions, simulations, and writing exercises, students will bring these differing images to bear on an actual legal case in order to see how alternative ideas of justice might affect how lawyers understand and perform their work.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1112. Law, Innovation and Technology Colloquium. 2 to 4 Credit Hours.**

Innovation and new technologies consistently generate regulatory questions - whether and how to govern the production, distribution, operation, or use of the technology - and what consequences may follow from regulation for industry, marginalized groups, and the population in general. Of course, different technologies involve different background conditions and contexts that raise discrete regulatory questions and related issues of law and policy. Thus, there is a robust - and growing - set of sub-disciplines focused on law relating to cybersecurity, big data, artificial intelligence, robotics, nanotechnology, and assisted reproductive technology to name just a few. This course seeks to provide students with the analytic and critical tools necessary to engage current law and technology issues in a sophisticated way both theoretically and doctrinally. Ideally, these tools may eventually be employed by interested students in the future to evaluate the latest innovations and technologies over time.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 1500. National Business Negotiating Competition. 1 to 2 Credit Hour.**

The National Business Negotiating Competition is a credit bearing activity for eligible law students.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5001. Equity and Bias in Education: Selected Topics. 2 to 3 Credit Hours.**

Education law in the United States presents a stunning array of bias issues. At the very top of the list, of course, is racial discrimination in the assignment of students to schools and the provision of resources. Even those students who never take an education law course are likely to encounter *Brown v. Board of Education* and perhaps even *Parents Involved in Community Schools v. Seattle School District No. 1*. This course is intended to focus on selected issues of bias in the law of elementary, secondary and higher education. The focus on bias will have two major aspects. One is the exploration of ways in which education law has often, in combination with other areas of law, such as discriminatory housing laws, contributed to educational inequity based on race, ethnicity, gender, disability, and other categories. The other aspect involves looking at ways in which education law has been, is being, or could be changed in order to address these inequities.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404 (may be taken concurrently)

**JUDO 5020. Commercial Arbitration Law and Procedure. 2 to 3 Credit Hours.**

This course looks at the body of law, primarily federal law under the Federal Arbitration Act (FAA), governing the intersection between courts and the arbitral forum. It covers the issues presented to courts for resolution relating to compelling arbitration, arbitrators' exercise of court subpoena power, and court confirmation and vacatur of arbitration awards. The primary focus of the course will be the FAA and the body of case law governing application of its provisions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5021. Race and the Law. 2 to 3 Credit Hours.**

The course goal is to understand the role of the law in creating and perpetuating systems of racial privilege and discrimination in the U.S. from the colonial period to the present. It will also critically examine the effectiveness of race-conscious remedies. The course will cover issues related to African Americans, Asian Americans, Latinos/as, and American Indians.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5022. Ethical Dilemmas and Standards for Public Servants. 2 to 3 Credit Hours.**

This course will delve into what is ethical behavior for government officials and politicians. It will analyze the definition of ethics, what constitutes ethical behavior, and will examine moral theories in relationship to real life cases. It will also focus on examining how and where ethics fit into the roles of government officials and politicians. This course does not fulfill the requirement to take Professional Responsibility.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 5023. Sentencing. 2 to 3 Credit Hours.**

This course will examine many of the critical sentencing issues currently being faced by prosecutors, defense attorneys and judges. We will consider the evolving role of sentencing guidelines and the ways in which mandatory sentences, plea bargaining, cooperation and other important factors impact the sentencing process. We will also explore issues raised by imprisonment, alternatives to incarceration, including the use of probation and fines, and the roles and rights of victims in the sentencing process.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 5024. International Commercial Arbitration. 2 to 3 Credit Hours.**

This course will explore the law and practice of international and domestic commercial arbitration in the United States and, to a lesser extent, arbitrations under the laws of other countries that are major arbitration venues. National arbitration statutes, international treaties and the procedural rules that apply in arbitration proceedings will be studied, and we will examine the way arbitrations are conducted in the real world.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5025. Legislation and Regulation. 2 to 3 Credit Hours.**

This course introduces students to the central role of legislatures and administrative agencies in the current legal and social landscape, addressing how statutes and regulations are generated, changed, and interpreted by the legislative, administrative, and judicial arms of government within U.S. federalism.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5026. Nonprofit Organizations. 1 to 4 Credit Hour.**

Nonprofit organizations, ranging from foundations to private universities to religious organizations to political parties, play a vital and growing role in American society. This course will introduce students to the law governing nonprofit organizations, focusing on charitable entities, examining both tax and non-tax issues raised by the nonprofit sector.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600 (may be taken concurrently)

**JUDO 5027. Legal and Clinical Approaches to Healthcare. 2 to 3 Credit Hours.**

This course provides students with an in-depth analysis of U.S. health policy and the impact on access, safety, quality, and efficacy of health delivery. Students will also be asked to review pertinent cases affecting health care practices as well as legislation affecting the profession. Included is a study of appropriate health care practices and their connection to the law. A major emphasis will be placed on safety in the delivery of health care.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5028. Law and Aging. 2 to 3 Credit Hours.**

This course examines the laws and programs that affect the elderly. Topics to be considered include public entitlements/benefits programs, income maintenance, health care, guardianship and long term care.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5029. Drug and Medical Device Law. 2 to 3 Credit Hours.**

The governance of interstate and intrastate commerce in drugs and medical devices is studied. Emphasis is placed upon the effect of the Federal law upon the research, manufacture, marketing and distribution of drugs and medical devices through the regulatory activities of the federal agencies. Pertinent state laws and agencies are also considered.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5030. Negotiating and Documenting Corporate Transactions. 2 to 3 Credit Hours.**

This course develops the skills and strategies necessary to negotiate and document various facets of complex, but common, corporate transactions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508 (may be taken concurrently)

**JUDO 5031. Commercial Transactions. 2 to 3 Credit Hours.**

Commercial transactions invoke 3 distinct systems: (1) sales systems, (2) financial systems, and (3) secured credit. This course introduces the legal rules and principles that undergird the first and third of these systems, i.e. sales and secured transactions. It is organized with reference to the systems in which commerce operates rather than the sections or categories into which statutes and legal doctrine divide.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5032. Advanced Trial Advocacy: Technology in Trial and Litigation. 3 Credit Hours.**

This course will teach students to use technology to present their message persuasively; to organize and prepare cases; and to control the message both verbally and visually. It will introduce students to various current and emerging technologies used in courtrooms throughout the country. Students will also develop advanced trial presentation skills and learn more about the basic underpinnings of trial advocacy.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of S- (except where noted) in ((JUDO 0540 (D or higher) and JUDO 0558) or (JUDO 0460 and JUDO 0461))

**JUDO 5033. Sports and Entertainment Law. 2 to 3 Credit Hours.**

This course is designed to introduce students to some of the laws, rules and regulations that apply to people and organizations in the sports and entertainment industries, and to provide an overview of the key topics and debate involving those industries at both the amateur and professional levels.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5034. Social Justice Lawyering Seminar. 1 to 3 Credit Hour.**

This course will focus on one or more particular social justice issues each semester. This course will combine the theoretical and practical aspects of lawyering by covering topics such as basic lawyering skills, legal theory, and the role of lawyers in promoting social justice. The seminar will also include regular case rounds where students can collectively strategize about actual cases and advocacy projects while engaging in critical self-reflection about lawyering and professional responsibility.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5035. Civil Pre Trial Practice. 2 to 3 Credit Hours.**

This course takes students through the complete civil litigation pre-trial process. It begins with the investigation of a case pre-suit. (Pennsylvania actually provides pre-complaint discovery.) The next topic is pleading, followed by discovery (interrogatories, requests for production, requests for admission, and depositions), followed by motions for summary judgment, pre-trial memoranda, and pre-trial settlement conferences.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0517 and JUDO 0540)

**JUDO 5036. Temple Legal Aid Office: Family Law Litigation Seminar. 1 to 2 Credit Hour.**

This course will focus on key aspects of Pennsylvania family law practice and procedure as well as substantive law. This course will also develop students' lawyering skills, such as interviewing, negotiating and trial advocacy skills within the context of family law practice. Students will be exposed to critical practice issues which arise in family law, particularly as they relate to serving low-income litigants. The seminar will also include regular case rounds where students can collectively strategize about actual cases while engaging in critical self-reflection about lawyering and professional responsibility.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 0704.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5037. Federal Appellate Litigation Seminar. 2 to 4 Credit Hours.**

A weekly two-hour seminar for the Federal Appellate Litigation Clinic. Students will be assigned readings on the procedural aspects of federal appellate litigation, preparing the appellate brief, and presenting oral arguments. Students will also be assigned noteworthy cases and other readings on immigration law, habeas corpus litigation, constitutional law, and prisoners' rights. Guest speakers, including local appellate practitioners, judges, and law clerks, will be invited to address the seminar up to two times per semester.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 0759.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0550.

**JUDO 5038. Comparative Corporate Governance. 2 to 3 Credit Hours.**

This course will involve in-depth analysis of several major problems in the governance of large corporations, and the ways that power relations operate among the major constituencies of the modern corporation (shareholders, directors, officers, and other stakeholders). To give students a grounding in corporate governance, the course will initially focus on issues raised in the context of U.S. publicly-traded corporations, but as the semester progresses it will introduce particular governance problems and solutions presented in other legal systems.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0508 or JUDO J508)

**JUDO 5039. International Sports Law. 2 to 3 Credit Hours.**

International Sports Law will examine sports law in an international and comparative context. Among the topics to be studied are the nature of global sports; professionalism versus amateurism; the business structure of team and individual sports; their regulatory oversight; labor relations and collective bargaining; cheating, including doping, the use of performance enhancing drugs, and match-fixing; international merchandising; and entities for dispute resolution. While students will explore several sports and legal environments, the primary vehicles for study will be the Olympics, FIFA, the Court of Arbitration for Sport and European and Asian professional basketball and baseball leagues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5040. Survey of Legal Topics. 2 to 3 Credit Hours.**

This limited enrollment course addresses selected legal subjects likely to be encountered upon entering the practice of law and will involve systematic study and assessment of those subjects.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Law Prof, Fourth Year Law Prof.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5041. Poverty Law. 2 to 3 Credit Hours.**

Students will study what poverty looks like in the U.S. and how law addresses the needs of the poor and otherwise affects them. They will look at both laws specifically designed to alleviate poverty and its impact, like welfare, housing, and health care laws, and laws that have a disproportionate impact on the poor, like criminalization and some discrimination law. A particular emphasis will be placed on whether specific laws are in sync with policy goals. Second, students will consider what policy and litigation strategies are being tried presently to alter how things currently are and think about others that could be used.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404 and JUDO 0410.



**JUDO 5042. Introduction to Compliance and Ethics. 2 to 3 Credit Hours.**

Over the past few decades, the federal government has increased its focus on fraud and corruption in a variety of industries. Businesses are now required to develop comprehensive compliance and ethics programs to comply with a variety of federal, state, and in some cases foreign laws and regulations, in order to minimize risk and avoid legal repercussions. As a result, legal professionals who can advise companies on the development and implementation of effective compliance programs are in high demand. This course will introduce you to the compliance profession, one of the fastest-growing markets for lawyers. Focusing on health care, life sciences, financial industry, energy, and manufacturing sectors, the course will discuss the importance of corporate compliance and provide an overview of the legal and ethical considerations at play. The course will also explore relevant laws, examine emerging risks and provide an understanding of the design and implementation of compliance and ethics program in health care and multiple industries.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5043. Health Care Fraud: Investigation, Prosecution, and Compliance. 2 to 3 Credit Hours.**

This is a course in the investigation and civil and criminal prosecution of health care fraud and abuse. It will introduce the basic statutory structures of the provision of health care in the United States, the mechanisms by which individuals have abused that structure for personal or corporate gain, and the statutes and regulations under which such individuals are held responsible for that conduct. It will also explore the processes by which such abuse is discovered and investigated.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5044. Advanced Legal Research. 2 to 3 Credit Hours.**

This course is designed to strengthen student research and legal analysis skills through a detailed and comprehensive examination of key legal research resources, with a particular focus on advanced legal research methods and strategies. It teaches students to better evaluate and select sources, develop and implement appropriate research strategies, and conduct effective and efficient research on a range of complex legal topics.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5045. Pennsylvania Legal Research. 1 to 3 Credit Hour.**

This is a practical, hands-on course which provides students with advanced training on finding and utilizing materials for legal research in Pennsylvania. The course introduces students to a wide variety of Pennsylvania-specific legal resources, which will be useful in a broad range of legal practice in the state.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5046. Disability Law and Policy. 2 to 3 Credit Hours.**

Students will explore laws designed to protect and assist people with disabilities. The course will look at laws to provide income and health insurance support including Social Security, Medicare and Medicaid; laws designed to help people with disabilities to enter the workforce and the community, including the ADA and other civil rights laws; and laws designed to protect people with disabilities in the community, including guardianship, criminal justice, and civil commitment laws. The course will focus on how each area of law is shaped by a different conception policy makers have about who people with disabilities are and how the law can help. Students will compare these and struggle with the ways people must fit into each definition to get help under the law, and will come to understand disability laws and what must be done to access them effectively.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5047. Internet Law. 2 to 3 Credit Hours.**

The goal of this course is to introduce students, by means of a series of specific case studies chosen to illustrate the clash between existing legal regimes and new technologies, to a reasonably comprehensive subset of the legal problems that are being addressed as part of the developing "Internet law."

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5048. Ethical Perspectives on Law. 2 to 3 Credit Hours.**

This course is about different visions of moral responsibility in law. We will examine a variety of concepts, including "neutral partisanship," accountability, fault, causation, and justice. In addition to conventional legal materials, we will use literary works to probe these ideas.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5049. Advanced Topics in Contract Law. 2 to 3 Credit Hours.**

This course surveys the empirical literature on contracts and contracting. It is organized around three questions, which will serially recur in the readings: (1) What terms are in contracts, and why? (2) When do firms or individuals pay attention to terms (if ever)? (3) How do individuals and firms respond to contract terms? That is, rather than approaching the field of contracts from the typical doctrinal or economic perspectives, we will proceed more pragmatically, using sociology and psychology to develop models of how agreements are formed and order relationships.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0406, JUDO J406, or MLAI C406)

**JUDO 5050. Commercial Transactions. 4 Credit Hours.**

This course will introduce students to the law of Secured Transactions under Article 9 of the Uniform Commercial Code and how transactions under it are addressed in bankruptcy, which is often viewed as the "acid test" for their enforceability (or not). Studying these subjects together (sometimes characterized as a "systems approach") makes it possible to better understand how credit transactions succeed or fail. Thus, creditors who have a properly created security interest will typically receive the full value of their interest in that property; unsecured creditors, by contrast, have no interest in a debtor's property at all. They typically recover far less. Moreover, while most credit transactions are negotiated and documented against the possibility of bankruptcy, there are other systems and laws for the collection of unsecured debt about which all practicing lawyers must have some basic knowledge, which this course would provide.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5051. Environmental Compliance and Enforcement. 2 to 3 Credit Hours.**

This course will introduce students to the environmental law framework in the United States, key federal environmental statutes, various enforcement models built within those statutes, and the theories behind compliance. The course will also briefly touch upon federalism and the relationship between federal and state agencies.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5052. Justice Lab Seminar. 1 to 3 Credit Hour.**

Justice Lab students participate in a classroom component that addresses the theoretical and substantive bases of Justice Lab's work. Classroom sessions are also an opportunity to reflect on ongoing client representation, and provide classroom skill development in support of client work.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 0784.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5053. International Compliance. 2 to 3 Credit Hours.**

This course will survey key compliance challenges facing corporations operating in a global environment. A case study method will be used to explore regulatory regimes in the United States and key foreign jurisdictions that impact international corporate operations, including (i) antitrust/cartel questions, (ii) corruption, (iii) market manipulation, (iv) trading with certain countries, and (v) data privacy. In doing so, compliance issues at all stages of corporate operations will be considered including both ex ante issues (i.e., structuring effective policies, procedures and programs to avoid compliance issues in the United States and abroad) as well as those that arise ex post (i.e. dealing with allegations of non-compliance and remediating any violations found). Also considered will be the liability risks of not only the corporation itself, but also corporate managers and directors (in both their professional and, occasionally, their personal capacities) alongside the risks for third parties who fail to implement and oversee reasonable compliance programs.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5054. Mindful Lawyering: Techniques for Effective Counseling, Negotiation and Advocacy. 2 to 3 Credit Hours.**

This course is designed to accomplish two primary goals. First, to teach students mindfulness practices and to explore how those practices can enhance their effectiveness in various lawyering skill areas. These include the ability to: (1) listen to, counsel, and work effectively with, clients; (2) identify and deploy negotiating strategies that maximize value for all parties; (3) mediate conflicts; (4) advocate for desired legal and social outcomes; (5) develop leadership skills; and (6) maintain balance and focus in high stress professional environments. The second major course goal will be to teach students effective legal researching and writing techniques.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5055. Comparative Criminal Procedure. 2 to 3 Credit Hours.**

This course will examine how police and prosecutors in three distinct cultures gather evidence and investigate criminal activity. Subject areas to be treated in detail will include arrest, search and seizure, obtaining of statements and confessions, pre-trial release, discovery, identification procedures, wiretapping and sting operations. Comparisons and distinctions will be drawn in an attempt to draw from each system what is useful, effective and desirable for the future.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0410.

**JUDO 5056. Current Issues in Cyberlaw. 1 to 3 Credit Hour.**

This course is a practical course in which students will apply cyberlaw to pseudo clients. Legal cyberlaw principles involved in electronic transactions, defamation, data breaches, identity theft, hacking, cryptography and encryption, cyberprivacy, cybersecurity, cybercrimes, national security, electronic surveillance, virtual currencies, the deep and dark web, among other current cyberlaw issues will be studied.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5057. Internet of Things. 1 to 3 Credit Hour.**

The Internet of Things (IoT) is the common name for the emerging world of everyday objects such as wearable technology, personal devices, medical electronics, appliances, homes and cars being linked to each other through the Internet. They collect large amounts of data that is stored in cloud platforms and communicated to other devices and to other parties. They provide revenue for businesses that sell data collected from IoT devices. Additionally, they provide developers, governments, researchers, investigators, hackers and others access to analyze information in different ways. This course examines the legal, policy, and technology issues of these and other expanding aspects of IoT, focusing on how lawyers can be integral to the course of IoT development.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5058. Empirical Legal Research Methods: Health Policy. 1 to 3 Credit Hour.**

This course aims to provide students with a comprehensive introduction to scientific methods for measuring law and its effects. While the focus will be on the evaluation of the health effects of law, the training will be applicable to other social and economic effects as well.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5059. Drug Law Policy and Practice: Marijuana Regulation. 2 to 3 Credit Hours.**

This course will analyze how we regulate drugs in the United States, using one of the most current and high profile examples - marijuana. As part of our analysis, we will use a public health perspective to evaluate marijuana policy. Our study of the history and current landscape of marijuana law in the United States will have a particular focus on how policy is made through legislation and regulation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5060. International Trade Law. 2 to 3 Credit Hours.**

This course focuses on the law of international investments and trade policy and covers the nature of the international investment transaction and the various forms of regulation thereof. The course will also consider national governmental policies dealing with trade and the restriction thereof.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5061. Introduction to Healthcare Compliance. 2 to 3 Credit Hours.**

This course will examine the fundamentals of health care compliance, examining written compliance policies and procedures; compliance oversight and committees; enforcement and reporting requirements; screening of employees and vendors; and negotiating and implementing corporate integrity agreements. The course will also address key U.S. laws and regulations that inform the development and implementation of health care compliance programs and will emphasize practical skills and case studies.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5062. Environmental Issues in Business Law. 2 to 3 Credit Hours.**

This course will use case studies, regulations/statutes, and hypothetical fact patterns to facilitate comprehensive discussion of various environmental law topics as well as complicated ethical issues. Students will be divided into groups and asked to role-play as environmental attorneys in, among other things: (1) acquiring, financing, and selling an ongoing business and real property with potential environmental concerns; (2) investigating, disclosing, and negotiating with opposing counsel and regulatory agencies regarding a client's noncompliance with environmental laws; (3) participating in a public hearing involving competing interest groups; and (4) handling the complex ethical issues relating to the above situations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5063. New Technology Regulation. 3 Credit Hours.**

This course examines how law, regulation and government policy shape the development and success of new technologies. It surveys the major legal and policy issues raised by emergent regulatory regimes for self-driving cars, drones, the Internet of Things, online intermediaries like Google and Facebook and sharing economy businesses like Uber and Airbnb. Using these specific technologies as anchors, students are introduced to modern regulation and regulatory agencies, exploring the design, implementation and enforcement of regulation.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5064. Sheller Center for Social Justice: The Systemic Justice Clinic Seminar. 2 Credit Hours.**

The clinical seminar will address the substantive and procedural laws governing civil rights litigation; provide critical analysis of the legal framework overlaying a civil rights practice; and cover lawyering practice skills, through reading, discussion, and in-class simulations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5065. Police and School District Litigation Defense Clinic. 1 to 4 Credit Hour.**

Second and Third year students will examine policy considerations and litigation strategies in the context of local civil rights litigation. Half the class will work with and represent Philadelphia police officers and other City employees in civil rights suits, while the other half will represent employees of the School District of Philadelphia. The students will examine a number of recent high profile cases litigated by the City and School District and be asked to consider the interplay of civil procedure, constitutional law, and public policy, and how these elements are used to effectuate successful results. Students will learn from instructors and guest lecturers who litigated these cases and be afforded the opportunity to discuss in an intimate setting how these attorneys approach critical litigation. Students will then apply what they learn when they are given the responsibility (under supervision) for drafting motions, preparing and responding to discovery, attending settlement conferences, and appearing before the Court or arbitration panels. By participating in every phase of litigation and learning how strategy permeates the process of litigation, students will begin to gain the practical experience that takes many attorneys years to acquire.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404 and JUDO 0402.

**JUDO 5067. Low Income Taxpayer Clinic Seminar. 2 to 4 Credit Hours.**

This seminar will develop students' substantive knowledge of federal civil tax procedure and tax issues related to low-income taxpayers. The first few classes will develop foundational skills for clinic work and later classes to build on that foundation both with lawyering skills and tax knowledge. The seminar will be comprised of three components: (1) case rounds; (2) bi-weekly journal entries; (3) presentations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Co-requisites:** JUDO 0757.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5068. Corporate Governance and Disclosure. 2 to 3 Credit Hours.**

This course will study the system and structure in which corporations function including: the board structure, director independence, and board attendance; board composition and board diversity; nominating and governance committees; the framework for effective corporate governance; the duty to disclose and duty to update disclosures; the structure and authority of the relationships between the corporation and a board of directors, management, shareholders, and other stakeholders; and disclosure measures.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO 5069. Global Anti-Bribery and Corruption. 2 to 3 Credit Hours.**

The course is designed to familiarize students with the current state of global Anti-Bribery and Corruption law and practice, how the current situation came to be, how rapidly the international legal and business environment has developed in recent years with respect to Global Anti-Bribery and Corruption, and challenges facing both businesses and enforcement authorities. The course will examine the development, introduction and impact of the U.S. FCPA and the major international laws, treaties and regimes that followed it. It will review the emergence of key new anti-bribery laws worldwide. And it will review the impact of major scandals under emerging anti-bribery and corruption laws.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5070. Practice Skills Lab. 1 to 4 Credit Hour.**

Upper division and graduate students will have the opportunity to enroll, concurrently with any approved course offered in a given semester, in a Practice Skills Lab. Each Practice Skills Lab will be organized around exercises designed to further put into practice the doctrine or material being taught in the anchor course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO 5072. Immigration Consequences of Criminal Conviction. 2 to 3 Credit Hours.**

Non-citizens who have contact with the criminal justice system face a range of unique consequences, including arrest by immigration authorities, deportation, and detention without a bond hearing. This course explores multiple points of intersection between criminal law and immigration law. Topics include the immigration consequences of criminal convictions, the constitutional limitations on detention and deportation of non-citizens with convictions, and the federal government's use of state and local criminal justice systems to enforce immigration laws. This course will familiarize students with the substantive law necessary to represent clients facing the immigration consequences of criminal convictions in both the criminal and immigration systems. It will also give students the opportunity to discuss the policy implications of predicating immigration consequences on a criminal justice system that disparately impacts poor people and people of color. The course will also familiarize students with the role constitutional law and the federal courts should play in limiting the political branches' power over non-citizens with convictions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5074. Cybersecurity Across Fields: A Hands-On Approach for Future Computer Scientists, Engineers & Lawyers. 2 to 4 Credit Hours.**

This innovative interdisciplinary course will advance and promote research of cybersecurity and privacy by bringing together three cohorts of students from the computer science, engineering, and legal disciplines. Together, these students will develop a Security Incident Response plan for a critical infrastructure service and work through related experiential and practical exercises. This course will offer students from each discipline insights into how their own disciplines and others approaches cyber risks, actual incidents and their aftermath.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO 5076. Cybercrimes. 2 to 4 Credit Hours.**

This course examines the legal issues raised by computer-related crimes (cybercrimes), including those involving your ever-present smart phone. In addition, we will study the challenges posed by rapidly developing technologies for citizens, law enforcement, and the courts. The course is structured around two main topics: (1) substantive criminal laws as they relate to cybercrimes, and (2) criminal procedure, especially with respect to how privacy laws regulate law enforcement investigations of cybercrimes. No technical background is required.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO J532 and JUDO 0404.

**JUDO A453. Intro European Union Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A467. Intl Intellctl Property. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A499. Comparative Constnl Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A500. Comparative Public Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A501. Comparative Private Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A502. Comparative Criminal Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A503. Int'l & Comprtv Envirnmntl. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A504. Intro European Cmnty Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A505. Intl & Euro Criminal Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A506. Admiralty: Intl Maritime. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A512. Comp Maritime Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A550. Compartv Immigration Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A583. Intl Protctn Human Rghts. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A637. Intl Commercial Transctn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A651. Intl Dispute Resolution. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO A900. Guided Research. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO A902. Guided Research Serial. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO C414. Legal Research & Writing. 4 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO C503. Comparative Crim Justice. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO C504. Irish Law & Legal Justice. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO C505. Law/Euro Econ Community. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO C600. Taxation. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO C837. International Sports Law. 2 to 3 Credit Hours.**

International Sports Law will examine sports law in an international and comparative context. Among the topics to be studied are the nature of global sports; professionalism versus amateurism; the business structure of team and individual sports; their regulatory oversight; labor relations and collective bargaining; cheating, including doping, the use of performance enhancing drugs, and match-fixing; international merchandising; and entities for dispute resolution. While students will explore several sports and legal environments, the primary vehicles for study will be the Olympics, FIFA, the Court of Arbitration for Sport and European and Asian professional basketball and baseball leagues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO D460. ITAP Section. 5 Credit Hours.**

Students register in this course to participate in the Integrated Trial Advocacy Program (ITAP). ITAP is a two-semester, ten credit course package. ITAP combines Evidence, Civil Procedure II and trial advocacy skills.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: L2LAWF, L3LAWP.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO D462. Integrated Transactional Program. 5 Credit Hours.**

Students register in this course to participate in the Integrated Transactional Program (ITP). ITP is a two-semester, ten credit course package. ITP combines Trusts & Estates, Professional Responsibility, and transactional practice skills.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Cohort Restrictions:** Must be enrolled in one of the following Cohorts: L2LAWF, L3LAWP.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I416. Professnl Responsibility. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I460. Trial Advocacy I. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I461. Trial Advocacy II. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I462. Transactional Practice I. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I463. Transactional Practce II. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I517. Civil Procedure II. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I540. Evidence. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO I602. Trusts & Estates. 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J100. Legal English/Communcn. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J101. Intro/Asian Legal System. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J102. Intro to Japanese Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J103. Intrnl Criminal Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J104. East/West Negotiation. 2 to 3 Credit Hours.**

This pass/fail course is intended to introduce students to the practical legal and cultural issues encountered when drafting and negotiating international agreements in the Asian context. A particular emphasis will be placed on negotiations involving American and Japanese parties through the examination of actual international commercial transactions. Students will have an opportunity to participate in the preparation of mock agreements and negotiations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J105. Current Issues in Japanese Law. 2 to 3 Credit Hours.**

This seminar is available only to students with a sufficient level of Japanese language ability to enable them to participate in classes conducted in Japanese and to read primary source material in Japanese. Students are not required to write Kanji, but will have to read complex Japanese texts. A sufficient measure of language proficiency required is the ability to read Japanese newspaper articles, with or without using a dictionary. The course covers a variety of subjects including recent legal reforms in Japan. This course is taught in Japanese and is open only to non-native Japanese speaking students.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J106. Regulatn Business Japan. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J107. Compartv Criminal Procdr. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J108. Taxation US-Japan Trans. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J109. International Antitrust. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J110. Law & Governance Internet. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J111. Intl Enforcmnt IP Rights. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J112. International Finance. 2 to 3 Credit Hours.**

A survey of regulatory and transactional aspects of international finance, which is an area of increasing significance to all commercial lawyers. Topics will include an examination of banking and securities regulation in the United States, Japan and the European Union, major areas of international regulation and private ordering, derivatives, and international transactions such as syndicated loans and project finance.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J113. Comprtv Corporate Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J114. Comparative Bankruptcy. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J115. Compartv Competition Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J116. Chinese Bus/Investmt Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J117. Intro Chinese Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J118. International Entertainment Law. 2 to 3 Credit Hours.**

This course deals with selected legal issues which affect persons active in various aspects of the international entertainment industry. Topics will include privacy rights, contract law, copyright law, and labor law which will be discussed in the context of the stages of development of an international entertainment project.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J402. Civil Procedure I. 2 to 3 Credit Hours.**

This course will primarily focus on federal courts and will include issues of jurisdiction, venue, forum non convenience and choice of applicable law (the "Erie doctrine"). Res judicata and collateral estoppel concepts with their preclusive effects as the result of prior litigation will also be introduced along with joinder and class actions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J403. Administrative Law. 2 to 3 Credit Hours.**

A study of the process of lawmaking and law application by the executive departments and agencies of government and their control by the legislature and the courts. The primary emphasis is on the frequently competing goals of effective government, administrative discretion and fairness to affected parties. A part of the course is designed to give students insights into the allocation of law and policy making among executive, legislative and judicial branches. Another part focuses on administrative procedure and the various constitutional, statutory and common law underpinnings of such procedures.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J404. US Constitutional Law. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J406. Contracts. 2 or 3 Credit Hours.**

This course is designed to introduce students to the fundamental concepts of U.S. contract law. Areas of principal focus include offer and acceptance, consideration, interpretation and construction, conditions, breach of contract and remedies therefore. Students will also study Article 2 of the Uniform Commercial Code.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J410. Criminal Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J414. Legal Research & Writing. 2 to 4 Credit Hours.**

This course is required of all non-American trained LL.M. candidates. It may be taken in either Tokyo or Philadelphia and should be completed as soon as possible after entering the program. In this course, legal research, writing and advocacy are explored. After introduction to the American legal system and basic research techniques (including on-line data bases such as Lexis/Nexis), problems are assigned and various methods are utilized to help students develop their writing and analytical skills. The objective of the program is to develop basic legal skills in an informal seminar atmosphere that allows maximum contact with the assigned instructor. There will be one or two Saturday morning library workshops. (American J.D. students are not permitted to enroll in this class.)

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J416. Professional Responsibility. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J418. Property. 2 to 4 Credit Hours.**

This basic U.S. law class is open to non-J.D. students. It explores the basic relationships in systems of ownership of personalty and realty, and the devices for transferring ownership are considered. Private and public planning, regulation of land use, the estate system and the new property theories are also examined.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J420. Torts. 2 to 4 Credit Hours.**

The study of legal remedies in civil proceedings for interference by others with one's person, property and intangible interests. Historical and theoretical bases of the principal theories of tort liability are examined to develop an understanding of current law and a sensitivity to changing patterns of tort responsibility emerging from a dynamic society.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J422. Legal Decision Making. 2 to 3 Credit Hours.**

Examination of theory and operation of the main institutions and processes of the American legal system. Techniques of case and statutory analysis are featured, along with consideration of the impact of social, economic, historical and jurisprudential factors on the development of the law. Although judicial and legislative processes receive most attention, students are also introduced to the role and methods of administrative agencies.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J423. Intl/Comprtv Family Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J424. International Civil Litigation. 2 to 3 Credit Hours.**

With the globalization of business transactions, cross-border civil litigation has become common. This course will examine the international law that governs "foreign" relations between individuals or business entities, and will discuss the theory and practice of international civil dispute settlement. The issues it will cover include determining the proper forum, finding the applicable law, judicial assistance (e.g. service of process, discovery and foreign judgment enforcement), and litigation involving a foreign state. It will also discuss such important practical matters as how to draft a dispute settlement clause, how to meaningfully choose a forum and the applicable law to more effectively protect the client's interest, and how to address potential obstacles facing lawyers engaging in international practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J425. Introduction to the American Legal System. 2 to 3 Credit Hours.**

This course is intended to provide the student from a non-common law background with an introduction to the basic concepts, structures and institutions of the American Legal System. Topics to be covered include: historical origins of the common law system; common law method; the structure of the United States government, Federal and State; the Constitution; judicial review, structure, organization and operations of courts in the United States, civil litigation, case analysis and precedent; the legislative branch: statutes and legislative history; and the executive branch: administrative law.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J427. Intro Intl Business Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J435. Human Rights/Euro Union. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J440. Unincorporated Assoctns. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J444. National Security Law. 2 or 3 Credit Hours.**

This course will study national security threats – those posed to the United States by state and non-state actors who target US civilians, personnel and interests with the aim of achieving political change – and examine the legal controversies raised in responding to these threats domestically and abroad. The course will be divided into two parts. Part One will examine legal controversies in constitutional law. This includes the scope of presidential powers in times of heightened national security threats and the separation of powers more broadly. We will also explore the tension between national security and individual liberties during times of crisis. Part Two will examine the legal controversies raised by irregular combat between the US and non-state actors internationally. We will study some of the most important and controversial legal issues triggered by the so-called 'war on terror.'

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J446. Intl IP Licensing. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J447. Intelctl Property Licnsng. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J453. Intro European Union Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J464. International Contract Drafting. 2 to 3 Credit Hours.**

This course bridges the gap between contract theory and contract practice and offers practical insights into international contracts such as licenses, distributorships and joint ventures. The principal focus will be on the development of skills in drafting these types of contracts, although ancillary preparation exercises may also be undertaken.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J466. International Environmental Law. 2 to 3 Credit Hours.**

This course critically examines the legal response to a variety of transborder and global environmental problems. Special emphasis will be placed on the development of legal norms in specific contexts such as protection of endangered species, nuclear accidents, ozone depletion and global climate change. The course will also examine legal principles regarding natural resource management and the relationship between trade and environment. Special attention will be given to the practice of Environmental Law in an Asian context.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J467. International Intellectual Property. 2 to 3 Credit Hours.**

This course will cover the broad outlines of the four major branches of intellectual property law - patent, copyright, trademark, and trade secret law - and will consider the following topics: obtaining rights by registration in the U.S. and other typical examination countries; exploitation of intellectual property rights with a focus on technology transfer including compulsory licensing, foreign ownership requirements in ventures and antitrust considerations; protection of rights with a focus on the difficulties of protecting intellectual property rights by litigation, policing property rights, preventing international distribution, international trade piracy, and gray market goods; and other topics as time permits.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J472. Intl Commercl Arbitratn. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J473. Law of Cyberspace. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO J478. Cyberprivacy Law. 2 to 3 Credit Hours.**

Today's state of technology provides limitless possibilities to collect, analyze and exchange information globally. Cyberprivacy law aims to regulate the use of information that may identify an individual, so-called personal information, such as names, pictures, GPS location information, cookies and IP addresses. During this course we will discuss the rationale and ethics behind privacy regulations while defining what should constitute privacy from the perspective of consumers, technology innovators and the government. Even if global cyberprivacy regulations are desired by some stakeholders, laws tend to be limited to the national level. The European Data Protection Regulation (GDPR), adopted in the European Economic Area in 2016, has set a new standard in terms of protection of personal information that has been followed by many countries since. Analyzing the GDPR, students will learn about the European approach to personal information protection, data processing, and domestic and international data transfers. We will apply the newly acquired knowledge to practice in joint course exercises of daily tasks privacy lawyers face, including analyzing data flows from commercial websites, creating response protocols for data breaches and drafting a privacy policy. Once being familiar with the GDPR, students will have the opportunity to discover and compare other privacy law initiatives from around the globe in class.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J490. Law/Electronic Commerce. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J494. Advising the Multinational Company on Global Legal Issues. 2 or 3 Credit Hours.**

This interactive and participatory course is intended to provide a survey of the types of issues confronting lawyers, and particularly in-house lawyers, who advise multinational corporations on a worldwide basis. The areas to be discussed include topics that will cross corporate law, tax law, labor and employment law, employee benefits, litigation and corporate compliance. Real life examples will be used to illustrate the complicated nature yet importance of this type of practice. Further, in addition to the more substantive legal topics to be covered, the course will also be interspersed with practice tips, jurisdictional practice highlights and ethical considerations for the multinational practitioner. The success of the course depends highly on each class member coming to class prepared, and more important, on each class member participating in our discussions. Because of this, class participation will account for 30% of the final grade. The remaining 70% of a student's grade will be based on a final paper and presentation (weighted equally). Note: This course does not satisfy the graduation writing requirement.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J500. Admiralty. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J501. International Dispute Resolution. 2 to 3 Credit Hours.**

As worldwide trade increases, the instances in which disputes cross national borders increase as well. This course introduces the types of issues private international lawyers encounter. Major features of international litigation will be considered, such as uses of Alternative Dispute Resolution (ADR), jurisdictional and discovery questions, and enforcement of arbitration and forum selection clauses. Leading U.S. Supreme Court cases will be analyzed, as well as major treaties.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J502. International Trade Contracts. 2 to 3 Credit Hours.**

This course looks at formation, performance and enforcement of international contracts involving the sale of goods. The course focuses on the Convention on Contracts for the International Sale of Goods (CISG) and other sources of law. Students will compare provisions of the CISG with Article 2 of the UCC and with comparable commercial codes. The sale of goods in connection with distribution, license and joint venture agreements will be considered, and will explore how contracts doctrines apply in the international and comparative context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J504. Antitrust. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J506. Banking and Financial Regulation. 2 to 3 Credit Hours.**

This course will focus, in particular, on the history of banking regulation, the state/federal dichotomy, Dodd-Frank, the Bureau of Consumer Financial Protection, financial institution compliance officer functions, and such core federal agencies as the FDIC, the SEC, the Federal Reserve, the Department of the Treasury, and the CFTC.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J508. Corporations. 2 or 3 Credit Hours.**

Comparison of forms of business organizations, promoting and organizing the business association, allocation of an accountability for management and control of the business organization, problems incident to corporate entity, proxies, and the derivative suit, the issues of shares, going concern and other asset distribution and organic changes are studied.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J509. Comparative Constnl Law. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J515. Telecommunication Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J517. Civil Procedure II. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J521. Comprtv Dispute Settlmnt. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J522. Conflict of Laws. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J528. Corporate Reorganization. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J530. Bankruptcy. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J532. Criminal Procedure I. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J535. Entertainment Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J537. Employment Discriminatr. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J540. Evidence. 2 to 3 Credit Hours.**

An examination of the rules governing the use of evidence, including problems of relevancy, hearsay, impeachment, burden of proof, presumptions and the function of judge and jury.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J550. Comparative Immigration Law. 2 to 3 Credit Hours.**

This course surveys the key areas of Japanese and U.S. immigration law, and provides students with a sound understanding of not only the law, but its application in practice in both Japan and the U.S. Cases and articles are used to illustrate the topics and issues that are relevant to both practicing lawyers and students of immigration law. The course will cover traditional areas such as political asylum and refugees, nonimmigrant and immigrant visas, as well as other issues in order to provide an insight into the practice of immigration law as performed in both Japan and the U.S.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J551. Comprtv Trademarks. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J552. Comparative Patent Law. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J553. Copyright Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J554. International Investment. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J555. International Trade Law. 2 to 3 Credit Hours.**

This course will introduce legal, business and policy aspects of international trade with a focus on U.S. trade law in the context of the WTO-GATT agreements. The class will consider tariffs and tariff negotiations, quotas, most favored nation clauses, domestic standards, industrial safeguards, export regulation, regional trading blocks, national treatment clauses, adjustment assistance, antidumping and countervailing duty law, international rules on intellectual property, trade services and other topics. The underlying goal of this course is to provide a rounded understanding of the interplay between national and international trade regulation and its impact on private international transactions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J556. International Law. 2 or 3 Credit Hours.**

This course is designed to introduce students to the fundamental concepts of international law. Areas of principal focus include the nature and sources of international law; treaties and customary international law; international dispute resolution; international organizations (including the United Nations, European Union, and the GATT); and the application of international law in United States courts.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J568. Family Law. 1 to 3 Credit Hour.**

The role of the family and its connection with the legal system is considered, including the law pertaining to marriage, annulment, divorce, support and maintenance of the wife, children and other relatives, separation agreements, child custody, guardianship, status of wife, business transactions, property rights of husband and wife and intervention of the legal system in family affairs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J571. International Taxation. 2 to 3 Credit Hours.**

This course covers fundamental concepts in taxation of international transactions, both inbound (taxation of income received by foreign individuals or entities residing within the state) and outbound (taxation of the foreign operations of a nation's citizens and corporations). The course will address questions of residence, jurisdiction to tax, source of income, foreign tax credits, tax treaties, transfer pricing, and the operations of controlled foreign subsidiaries of a corporation. These topics are covered with reference to the U.S. and Japanese tax regulations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**JUDO J582. Comprt v Products Liablt y. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J583. International Protection of Human Rights. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J588. Remedies. 2 to 3 Credit Hours.**

Important and contemporary problems in compensatory and punitive damages, equity and contempt, restitution, and declaratory judgments are studied from a functional and practice standpoint.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J589. Secured Transactions. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J590. US Securities Regulation. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J591. Intl Securities Regulatn. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J599. Survey of Legal Topics. 2 to 3 Credit Hours.**

This limited enrollment course addresses selected legal subjects likely to be encountered upon entering the practice of law and will involve systematic study and assessment of those subjects.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J600. Taxation. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J602. Trusts and Estates. 2 to 3 Credit Hours.**

Surveys the principal devices used in the transmission of accumulated family wealth, concentrating primarily on the requirements for creating, modifying and terminating wills and trusts. Also considers intestate succession, will substitutes and selected issues concerning future interests, powers of appointment and fiduciary administration. The course explores the often clashing policies of effectuating donative intent and restraining dead-hand control.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J619. Citizenship in Legal and Theoretical Perspective. 2 to 3 Credit Hours.**

This seminar examines how political communities accept, reject, and expel individual members as citizens, and how citizenship law defines and reflects national identity. The course considers how citizenship is acquired at birth, and what requirements are imposed on naturalization applicants. It also considers in what circumstances the government can deprive an individual of citizenship; the special problems of dual nationality; historical racial and gender aspects of citizenship; the special context of terrorism; and the status of non-citizens and the extent to which they can be legally disadvantaged, as for instance with respect to public benefits and political participation. The course also considers the meaning of citizenship beyond the nation-state, including local, indigenous, regional, and global citizenship. The course will pursue critical perspectives on citizenship, drawing from constitutional, statutory, comparative, and international law sources.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0404.

**JUDO J625. Comparative Employment Law. 2 or 3 Credit Hours.**

This course will compare the U.S. and Japanese law on selected aspects of labor and employment law, including hiring/firing and promotion procedures and practices, the role of labor union, employer discretion in job assignments, equal opportunity in employment and sexual harassment.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J635. Computer Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J637. International Commercial Transactions. 2 or 3 Credit Hours.**

This course provides an introduction to transactional work undertaken by international commercial attorneys. Primary areas of study include export sale and financing, the international transfer of technology, compliance issues, and relevant international trade law of the United States. Particular attention is given to the mitigation and avoidance of risks attendant to international transactions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J642. International Organizations. 2 to 3 Credit Hours.**

This course explores issues of international law, authority, and legitimacy regarding international organizations and their operations in the world community.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J650. Corporate Transactions. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J651. Business Planning for International Transactions. 2 to 3 Credit Hours.**

This course covers issues that arise when business organizations plan international structures. It will address such questions as selection of entity, financial and ownership structures, steps in the formation of different entities, the rights and duties of different stakeholders, tax issues related to the foregoing and related issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J652. International Development and Policy Law. 2 to 3 Credit Hours.**

This course will examine how law and legal institutions shape economic, political and social development in both theory and practice. We will look at some key texts and debates to understand the theoretical foundations of the field. We will also look at development practice from a lawyer's perspective, drawing on examples from both developed and developing countries. These case studies will help us critically examine questions such as: Do urban slum residents have the same access to justice as their wealthier neighbors? Which corporate structures should a developing economy adopt? Do intellectual property rights form a barrier to improving public health? What is the rule of law and why are economists promoting it? The aim of the course is not to find definitive answers to development questions. Rather, students will be encouraged to think broadly and deeply about development and how law relates to it.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J653. Comparative Corporate Governance. 2 or 3 Credit Hours.**

This course will examine issues relating to corporate governance and ownership, including the legal structure of business entities in the U.S. and other countries; the duties of directors; and the roles of shareholders and employees. The course may also cover issues relating to the role of investors in and regulators of publicly traded corporations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0508 or JUDO J508)

**JUDO J654. Introduction to Compliance. 1 to 3 Credit Hour.**

This course will discuss the importance of corporate compliance and provide an overview of the legal and ethical considerations at play. The course will also explore relevant laws, examine emerging risks and provide an understanding of the design and implementation of compliance programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J655. Political and Civil Rights. 1 to 3 Credit Hour.**

Civil rights and individual freedoms under the First and Fourteenth Amendments of the U.S. Constitution are examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J656. International Compliance. 2 to 3 Credit Hours.**

Increased globalization of commerce has substantially increased the risk of fines, sanctions and costly litigation resulting from the way and manner business is conducted around the world. Governments and various Unions have responded to globalization in varying degrees by enforcing existing laws, enacting new laws and regulatory requirements addressing competition, market manipulation, trade and corruption. Aside from costly fines levied against the Corporation, various legal regimes have begun to impose direct liability on directors, managers and third parties who have failed to implement and oversee reasonable compliance programs. These factors require a vigorous and ever changing compliance programs for corporations. A thorough understanding of compliance issues helps lawyers to craft creative and effective legal solutions for their clients. An excellent compliance program cannot only prevent problems, but also discover issues at an early stage and can be used to receive credit where a corporation runs afoul of a law.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J813. Comparative Corporate Law. 2 to 3 Credit Hours.**

In both the US and Japan, the corporation is the overwhelmingly dominant form of business entity. Moreover, given that a good deal the modern Japanese Company Law was derived from Illinois corporate law, it is not surprising that (on the surface at least), Japanese and US corporate law take similar approaches to many of the legal problems which accompany the characteristic fact of the modern corporation the separation of ownership and control. This course seeks to explore many of these doctrinal similarities, while also analyzing some of the differences in the application and enforcement thereof, within the larger context of Japanese and US business practice. It also hopes to elicit some lessons which the corporate law of each country may provide for lawyers and policy makers of the other.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J825. Comparativ Employment Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J835. Innovation Law and Policy. 2 to 3 Credit Hours.**

This course will examine how law and policy affect, and are affected by, innovation and scientific/technological advancement. To understand the relationship between law, policy, and innovation, we will focus on several ways in which innovation, law and policy interact with one another. This course will begin by reviewing certain laws and policies that were developed to promote innovation and technological development. While this course will explore certain concepts revolving around biotechnology, genetics, and neuroscience, students do not need a background in science to take this course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.



**JUDO J837. International Sports Law. 2 to 3 Credit Hours.**

International Sports Law will examine sports law in an international and comparative context. Among the topics to be studied are the nature of global sports; professionalism versus amateurism; the business structure of team and individual sports; their regulatory oversight; labor relations and collective bargaining; cheating, including doping, the use of performance enhancing drugs, and match-fixing; international merchandising; and entities for dispute resolution. While students will explore several sports and legal environments, the primary vehicles for study will be the Olympics, FIFA, the Court of Arbitration for Sport and European and Asian professional basketball and baseball leagues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J840. Private Equity and Hedge Funds. 2 to 3 Credit Hours.**

This course explores the role of private fund investors in global financial markets today. This course will focus on hedge funds and two types of private equity investors: venture capital and buyout funds. We will discuss the structure of private funds and investment strategies of private funds. We will also gain an understanding of private fund transactions and will focus on venture capital transactions involving portfolio companies. We will also discuss the regulatory environment for private fund investors, including with respect to the Securities Act of 1933, the Investment Company Act of 1940, the Investment Advisers Act of 1940, and other relevant laws and regulations. We will discuss a number of other issues of current interest in the private fund arena, including issues related to diversity and inclusion and the role of pension fund investors in the private fund arena.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO J898. Comparative Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J900. Guided Research. 1 to 4 Credit Hour.**

This independent research offers students an opportunity to (1) satisfy the mandated writing requirement, (2) develop research, writing and analytical abilities through producing a single substantive research paper and (3) work with a faculty member in an area of the teacher's interest or expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO J902. Guided Research Serial. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO J903. Introduction to Japanese Law. 2 to 3 Credit Hours.**

This writing seminar introduces students to the major principles of civil law systems and Japanese law in comparison with the common law system such as in the United States.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J904. Guided Research II. 1 to 4 Credit Hour.**

Guided Research offers students an opportunity to: Develop research, writing, and analytical abilities. Work with a faculty member in an area of the student's interest and the faculty member's expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO J905. Guided Research II Serial. 1 to 4 Credit Hour.**

Guided Research offers students an opportunity to: Develop research, writing, and analytical abilities. Work with a faculty member in an area of the student's interest and the faculty member's expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO J907. Comparative Criminal Procedure. 2 to 3 Credit Hours.**

This course will compare selected aspects of criminal procedure in common law systems and in civil law systems. It will also examine specific aspects of American and Japanese criminal procedure. Topics to be investigated are arrest, detention, bail, search warrants, arrest warrants, the right to counsel, jury trial, confessions and guilty pleas.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J908. Comparative Criminal Justice. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**JUDO J915. Human Rights/Euro Union. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J921. Law/Electronic Commerce. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J922. Regulating Cyberthreats. 2 to 3 Credit Hours.**

This course will explore how law, including domestic and international law rules on cybercrime and international law rules applicable to cyber warfare, regulates cyberthreats. It will also analyze current debates over the appropriate forms of international governance of cyberspace and explore how law might be used to regulate the prospects of cyberterrorism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J923. Intl/Comprtv Family Law. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J924. International Contract Drafting. 2 to 3 Credit Hours.**

This course bridges the gap between contract theory and contract practice and offers practical insights into international contracts such as licenses, distributorships and joint ventures. The focus will be on skills development in drafting these types of contracts. Enrollment is limited to LLM students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J925. Refugee Law. 3 Credit Hours.**

This serial writing seminar will provide an introduction to international and domestic refugee law and policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0558 (may be taken concurrently), JUDO 0583 (may be taken concurrently), JUDO 0841 (may be taken concurrently), or JUDO J583 (may be taken concurrently))

**JUDO J926. Comparative Corporate Governance. 2 to 3 Credit Hours.**

This course will involve in-depth analysis of several major problems in the governance of large corporations, and the ways that power relations operate among the major constituencies of the modern corporation (shareholders, directors, officers, and other stakeholders). To give students a grounding in corporate governance, the course will initially focus on issues raised in the context of U.S. publicly-traded corporations, but as the semester progresses it will introduce particular governance problems and solutions presented in other legal systems.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0508 or JUDO J508)

**JUDO J927. International Protection of Human Rights. 1 to 3 Credit Hour.**

This course is designed as an introduction to issues of law, policy and institutional machinery for the promotion of human rights in the world community. Are nations bound by human rights laws (such as treaties, customary international law, U.N. Charter, European Convention, etc.)? Are the courts of a nation so bound? Where there is violation of human rights law, when and under what circumstances may diplomatic intervention, economic sanctions or military force be used to redress wrongs or to cause compliance with human rights guarantees?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J928. Unincorporated Business Entities. 1 to 3 Credit Hour.**

Most business organizations in the United States are no longer corporations, but unincorporated business associations such as sole proprietorships, partnerships, or limited liability corporations (LLCs). Entities including "mom and pop" stores, high-tech start-ups, and sophisticated investment funds use these business forms. This class examines these business entities, which every attorney engaged in a business practice needs to understand. After a review of agency law, the course will examine partnerships, limited partnerships (LPs), LLCs, and if time permits some less common unincorporated business forms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J959. The Global Workplace. 2 to 3 Credit Hours.**

This three-credit writing seminar will strive to be, as one noted American scholar recommends, "comparative in method" and "transnational in perspective." It will compare the laws and legal environments of Japan, the U.S., and the E.U, and it will review the materials and discuss the mechanisms for attempting to achieve global labor standards. In their research, students may choose to focus on one of the following components of an inchoate global labor law: international treaties and conventions, best practices, corporate voluntary codes of conduct, transnational labor unionism, and the role of social movements.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J984. National Security Law. 2 or 3 Credit Hours.**

This course will study national security threats – those posed to the United States by state and non-state actors who target US civilians, personnel and interests with the aim of achieving political change – and examine the legal controversies raised in responding to these threats domestically and abroad. The course will be divided into two parts. Part One will examine legal controversies in constitutional law. This includes the scope of presidential powers in times of heightened national security threats and the separation of powers more broadly. We will also explore the tension between national security and individual liberties during times of crisis. Part Two will examine the legal controversies raised by irregular combat between the US and non-state actors internationally. We will study some of the most important and controversial legal issues triggered by the so-called 'war on terror.'

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO J991. International Development and Policy Law. 2 to 3 Credit Hours.**

This course will examine how law and legal institutions shape economic, political and social development in both theory and practice. We will look at some key texts and debates to understand the theoretical foundations of the field. We will also look at development practice from a lawyer's perspective, drawing on examples from both developed and developing countries. These case studies will help us critically examine questions such as: Do urban slum residents have the same access to justice as their wealthier neighbors? Which corporate structures should a developing economy adopt? Do intellectual property rights form a barrier to improving public health? What is the rule of law and why are economists promoting it? The aim of the course is not to find definitive answers to development questions. Rather, students will be encouraged to think broadly and deeply about development and how law relates to it.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO P300. Practicum Associated with a Course. 1 to 3 Credit Hour.**

Practicums associated with a course are open to students registered in a specific course and will involve projects for real clients that are supervised and evaluated by the course instructor.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO P400. Practicum: Administrative Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P410. Practicum: Alternative Dispute Resolution. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P415. Practicum: Bankruptcy. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P420. Practicum: Civil Rights. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P430. Practicum: Commercial Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P440. Practicum: Constitutional Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P450. Practicum: Consumer Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P460. Practicum: Corporate Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P470. Practicum: Criminal Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P480. Practicum: Death Penalty. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P490. Practicum: Employment Discrimination. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P500. Practicum: Environmental Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P510. Practicum: Family Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P520. Practicum: General. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P530. Practicum: Health Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P540. Practicum: Immigration Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P550. Practicum: Intellectual Property Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P560. Practicum: International Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P565. Practicum: Judicial Placement. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P570. Practicum: Law and Public Policy. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P580. Practicum: Non-Profit Organizations. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P590. Practicum: Property Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P600. Practicum: Public Interest Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P610. Practicum: Securities Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P620. Practicum: Sports Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO P630. Practicum: Tort Law. 2 to 3 Credit Hours.**

Practicums for law students will involve projects for real clients that are actively supervised and evaluated by individual faculty members. In addition to a faculty member, a supervising attorney may be involved. Faculty will assure the educational value of projects and students will meet periodically with their supervising faculty to discuss and review their projects. Each category of practicum (currently 25) is established as a separate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO R100. Legal English/Communctn. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R119. IP-Law Of The Internet. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R120. Intrnl Fiscal Policy. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R422. Legal Decision Making. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R424. Intrnl Civil Litigation. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R425. Intl Litigatn/Arbitratn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R426. Intrnl Business Policy. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R427. Introduction to International Business Law. 2 Credit Hours.**

This course will introduce you to international business law primarily in a transactional setting. This is a vast subject. To represent clients that want to do business with persons from other countries, a practitioner needs to know something of how contract law works in other countries, and of the international law (such as it may be) that will govern international transactions. In addition, one also needs to know about mechanisms businesses can use to deal with insecurity about delivery or payment. This insecurity can haunt any contract between strangers but is endemic in transactions between strangers when business is conducted at great distances. The lawyer also needs to know how to prospectively shape dispute resolution, should a dispute arise how to limit where and how disputes are resolved and what law the decision maker will use to decide them. This course will offer a broad survey of these and possibly other areas that confront business lawyers representing clients in international business transactions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R428. Intl Literary Perspectvs. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**JUDO R429. Comparv Legal Systems. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R430. Intl Human Rts/US Litgn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R432. Intrnl Criminal Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R464. Intrnl Contract Drafting. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R466. Intrnl Environmental Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R467. Foundations of International Criminal Law. 2 Credit Hours.**

This is not a basic course in international criminal law (ICL), which typically examines the crimes that constitute ICL, modes of liability, characteristic defenses, the tribunals involved, and the bases for assertions of jurisdiction by those tribunals. Rather, this course previews that more systematic analysis of ICL by addressing a number of constitutive issues, which are grouped into four broad topics regarding issues of: Definition, Universalism, Criminal Responsibility, and Transitional Justice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R468. Rome, the Roman Republic, and the American Constitution. 2 to 3 Credit Hours.**

This course examines the many ways in which the history of the growth and collapse of the Roman Republic affected the framing of the United States Constitution. Two main topics will be covered: first, the history of the Roman Republic, and second, the interpretations that later historians and political theorists - in particular, the authors of the Federalist Papers - gave to these events, and the role those interpretations played in the pre-Constitutional debates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R469. International Intellectual Property. 2 Credit Hours.**

This course will cover in an international context broad outlines of the four major branches of intellectual property law - patent, copyright, trademark, and trade secret law.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R494. Advising the Multinational Company on Global Legal Issues. 2 to 3 Credit Hours.**

This interactive and participatory course is intended to provide a survey of the type of issues confronting lawyers, and particularly in-house lawyers, who advise multinational corporations on a worldwide basis. The areas to be discussed include topics that will cross corporate law, tax law, labor and employment law, employee benefits, litigation and corporate compliance. Real life examples will be used to illustrate the complicated nature yet importance of this type of practice. Further, in addition to the more substantive legal topics to be covered, the course will also be interspersed with practice tips, jurisdictional practice highlights and ethical considerations for the multinational practitioner.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R499. Comparative Constnl Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R500. Intrnl Trade Contracts. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R501. Intl Dispute Resolution. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R502. Immigration Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R503. Criminal Appellate Pro. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R506. Intn'l Eff/Cntrl Enviorn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R507. Intn'l Commercial Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R508. Comparative Crim Justice. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R509. Comp Products Liability. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R513. Common Law & Civil Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R514. Comparative Family Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R515. Comparative Prod Liabil. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO R516. Disp Res Int'l Trans. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R517. Intro to EEC Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R518. Comp.Exam.Of Legal Rghts. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R521. Introduction to European Union Law. 2 Credit Hours.**

Italy is a member of the European Union, making it an excellent place to study European law. This course surveys the institutions of the European Union, the EU mechanisms for establishing law and adjudicating disputes, and the main bodies of EU law and leading cases. The focus of this course will be on issues of jurisdiction, harmonization and enforcement of the laws of the various European member states.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R522. Comp Contracts Principle. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R523. Admiralty. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R525. Comparative Social Justice. 1 to 4 Credit Hour.**

This course will explore international approaches to select social justice issues. The course defines social justice broadly, as the process of remedying oppression by understanding social inequality. The course will examine both the law's role in perpetuating social inequality and its great potential to realize social justice and will focus on how the courts of the U.S. and other countries decide cases that raise issues related to socially marginalized populations, with particular focus on gender, race, socio-economic status and sexual orientation. The course covers a wide range of doctrinal issues, including reproductive justice, education, marriage and family, voting and other civil rights issues. Students need not have any background in the law of these areas to understand the issues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R554. Intl Business Transactns. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may be repeated for additional credit.

**JUDO R613. Comparative Bioethics. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R625. Comparative Employment Law. 2 to 3 Credit Hours.**

This course will engage in a comparative study of current issues, practices, and debates in transnational and comparative employment law. The course will begin with a brief description of U.S. employment law, then students will compare and contrast the employment laws of various other nations. Topics will include hiring, termination, trade secrets, non-competition, anti-discrimination and anti-harassment, employee privacy, whistleblowing, hours and compensation, and employee benefits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R658. Globalization/Constn. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R690. Perspectives on Law Abroad: Rome. 1 to 2 Credit Hour.**

This course introduces students to the structure and practice of law in a foreign country. In Rome, the course will include an introduction to the civil law system and will cover additional subjects in coordination with the other courses being offered in the Rome Summer program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R835. Innovation Law and Policy. 2 to 3 Credit Hours.**

This course will examine how law and policy affect, and are affected by, innovation and scientific/technological advancement. To understand the relationship between law, policy, and innovation, we will focus on several ways in which innovation, law and policy interact with one another. This course will begin by reviewing certain laws and policies that were developed to promote innovation and technological development. While this course will explore certain concepts revolving around biotechnology, genetics, and neuroscience, students do not need a background in science to take this course.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0547.

**JUDO R837. International Sports Law. 2 to 3 Credit Hours.**

International Sports Law will examine sports law in an international and comparative context. Among the topics to be studied are the nature of global sports; professionalism versus amateurism; the business structure of team and individual sports; their regulatory oversight; labor relations and collective bargaining; cheating, including doping, the use of performance enhancing drugs, and match-fixing; international merchandising; and entities for dispute resolution. While students will explore several sports and legal environments, the primary vehicles for study will be the Olympics, FIFA, the Court of Arbitration for Sport and European and Asian professional basketball and baseball leagues.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO R840. Private Equity and Hedge Funds. 2 to 3 Credit Hours.**

This course explores the role of private fund investors in global financial markets today. This course will focus on hedge funds and two types of private equity investors: venture capital and buyout funds. We will discuss the structure of private funds and investment strategies of private funds. We will also gain an understanding of private fund transactions and will focus on venture capital transactions involving portfolio companies. We will also discuss the regulatory environment for private fund investors, including with respect to the Securities Act of 1933, the Investment Company Act of 1940, the Investment Advisers Act of 1940, and other relevant laws and regulations. We will discuss a number of other issues of current interest in the private fund arena, including issues related to diversity and inclusion and the role of pension fund investors in the private fund arena.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0508.

**JUDO R900. Guided Research. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO R901. Guided Research II. 1 to 5 Credit Hour.**

Guided Research offers students an opportunity to develop research, writing, and analytical abilities. Work with a faculty member in an area of the student's interest and the faculty member's expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Law Prof, Second Year Law Prof, Third Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO R902. Guided Research Serial. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO R903. Guided Research II Serial. 1 to 5 Credit Hour.**

Guided Research offers students an opportunity to develop research, writing, and analytical abilities. The student works with a faculty member in an area of the student's interest and the faculty member's expertise.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO T400. Moral Courage/Lawyers. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T433. Cyberspace. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T500. Intro Int'l Business Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T501. Comparatv Religious Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T502. White Collar Crime. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T509. Comparative Constnl Law. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T510. Middle East Peace Procss. 2 or 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T511. Comparative Family Law. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T515. Comp Crim Law and Pro. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T637. Intl Commercial Transctn. 2 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO T900. Guided Research. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO T902. Guided Research Serial. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO U010. MBA Course Transfer Credit. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO U020. MPH Course Transfer Credit. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO U030. University Transfer Credit. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO W510. Institutional Decision Making. 2 to 3 Credit Hours.**

This course introduces students to the theory and operation of the three branches of the U.S. government and explores the relative ability of each branch to address complex social and political issues. Through a series of contemporary case studies, the course considers the merits of judicial, legislative, regulatory, or market intervention. Issues covered may include health care reform, drug policy, consumer financial protection, LGBT equality, and religious freedom.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**JUDO W910. Law and Public Policy. 2 to 3 Credit Hours.**

This course is an individualized writing program that focuses specifically on legislative or regulatory reform. Students receive individualized one-on-one instruction while participating in collaborative work that encourages information sharing. Students complete a professional paper of approximately 30 to 40 pages that identifies an important policy question and proposes a workable legislative or regulatory solution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO W920. Law and Public Policy Colloquium. 2 to 3 Credit Hours.**

Law and Public Policy Colloquium is an upper level seminar where students meet with prominent policymakers and advocates in a small group setting. Arranged thematically, the course is intended to serve as a capstone experience for students studying in Washington, DC. Before meeting with the policymakers, students will examine relevant policy initiatives and work collaboratively to develop a series of questions and comments for the meeting. Grading will be based primarily on reflection papers.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO W930. Public Advocacy for Social Change. 1 Credit Hour.**

In this course, students will work intensively in teams to design and build an effective public advocacy campaign with multi-faceted deliverables. Among other things, students will identify a social problem, convince others to care about it in both written and oral form and develop a set of solutions to it. Students will identify stakeholders, targets, messages, and counter-arguments; testing ways to reach key audiences and measuring your success. Students will learn how to recognize effective marketing strategies; select a name for a campaign and build a brand that creates an emotional connection with target audience. Students will learn the craft of storytelling and how it can be leveraged to build a campaign in a fun and compelling way.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**JUDO X419. TU/Rutgers Exchange. 1 to 4 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**JUDO X537. Employmnt Discrm-Writing. 1 Credit Hour.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

## Kinesiology (KINS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**KINS 5202. Biomechanical Skeletal Tissue. 3 Credit Hours.**

This course offers an in-depth examination of the structure, composition, and material behavior of the basic skeletal tissues, including bone, cartilage, tendon, ligament, and muscle. The pathomechanics of injury, adaptation to loading, and degenerative changes associated with aging are analyzed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 5237. Racial Minorities and Sport. 3 Credit Hours.**

This dual-level course focuses on the positions and roles of African American and other persons of color in American sport. Topics to be covered assist in consciousness raising of both white students and students of color to the unique experiences and challenges of racial minority participants in sport.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 5239. Self-Development and Sport. 3 Credit Hours.**

This group process experiential course focuses the student's attention on the patterns and practices of her/his own sport or exercise. Assessments of satisfaction and areas for change are followed by action plan development for future experiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 5311. Physiology of Exercise. 3 Credit Hours.**

This course is a survey of the broad spectrum of exercise physiology. The physiology concepts presented are applied to research, rehabilitation, preventive medicine, and coaching. Such topics as nutrition and performance, weight control, stress testing, and ergogenic aids are discussed in detail. Basic laboratory techniques and classical experiments are demonstrated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 5312. Exercise and Nutrient Metabolism. 3 Credit Hours.**

The scientific principles controlling the relationship between exercise, nutrition, and weight control are examined. Special emphasis is directed toward the practical application of these principles for the development of individualized weight control programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 5313. Exercise and Aging. 3 Credit Hours.**

This course offers a study of the potential influence of exercise on the aging process. The scientific principles that govern aging processes and the influences of exercise on these processes are reviewed as well as the development of exercise programs for geriatric populations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**KINS 5333. Clinical Cardiovascular-Pulmonary Exercise Physiology. 3 Credit Hours.**

The course explores the roles and responsibilities of the clinical exercise professional in performing clinical exercise test procedures and programming exercise for populations with specific known cardiovascular and pulmonary diseases. Accordingly, the student will apply their knowledge, skills, and abilities of exercise programming to populations with diverse cardiovascular and pulmonary diseases, in mostly lecture and a few isolated laboratory experiences. The course will cover the basic pathophysiology of a wide variety of cardiovascular and pulmonary diseases and disorders, methods of diagnosis, the effect on the exercise response, and common management and medications. A review of the effects of exercise training will be conducted and recommendations regarding exercise testing and programming will be discussed for each disease/disorder. Some CV diseases/disorders covered include atherosclerosis, acute coronary syndromes, heart revascularization, cardiac transplant, valvular disease, heart failure, severe cardiac dysrhythmias, hypertension, and peripheral artery disease. Some pulmonary diseases include COPD, asthma, cystic fibrosis, restrictive disease and lung transplant. Also, students will learn to conduct a complete clinical evaluation according to the American College of Sports Medicine (ACSM) guidelines and conduct a clinical graded exercise test with an appropriate protocol. The content of this course is found on the certification exam for the ACSM Clinical Exercise Physiologist.

**Field of Study Restrictions:** Must be enrolled in one of the following Concentrations: Integrative Exercise Physiolog.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 5335. Clinical Exercise Physiology. 3 Credit Hours.**

While KINS 5333, Clinical Cardiovascular-Pulmonary Exercise Physiology focuses strictly on various types of CV and Pulmonary diseases, this course explores the roles and responsibilities of the clinical exercise professional in performing clinical exercise test procedures and prescribing exercise programs in populations with other specific known chronic diseases. Accordingly, the student will apply their knowledge, skills, and abilities to diseased populations in mostly lectures and an isolated laboratory experience. The course will cover the basic pathophysiology of a wide variety of chronic diseases and disorders, the effect on the exercise response, and common management and medications. A review of the effects of exercise training will be conducted and recommendations regarding exercise testing and programming will be discussed for each disease/disorder. Diseases/disorders covered include immunological, hematological, orthopedic, neuromuscular, cognitive and psychosocial disorders. Also, students will learn to conduct a complete clinical evaluation according to the American College of Sports Medicine (ACSM) guidelines and conduct a clinical graded exercise test with an appropriate protocol. The content of this course is found on the certification exam for the ACSM Clinical Exercise Physiologist.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Integrative Exercise Physiolog.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 5987. Practicum in Athletic Training IV. 3 Credit Hours.**

This three-credit course is designed to accompany the final of four clinical experiences in the athletic training curriculum to further develop and enhance the practical skills and knowledge necessary for clinical practice. Students will review and demonstrate organization and administration principles and applied research skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in KINS 5443, KINS 5644, and KINS 5687.

**KINS 8500. Symposium in Kinesiology. 3 Credit Hours.**

This course provides an opportunity for an in-depth examination of a special topic of interest, generally in a smaller class setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9201. Cardiovascular Exercise Physiology. 3 Credit Hours.**

This is a comprehensive cardiovascular exercise physiology course that emphasizes the mechanisms of regulatory function of the cardiovascular system during acute physical activity and the mechanisms of the adaptive response to exercise training.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9203. Appl Ex Physio-Neuromusc. 3 Credit Hours.**

Principles of neurophysiological regulatory mechanisms of muscle contraction are the focus of this course. Skeletal muscle physiology, including muscle fiber types, neuromuscular junction, motor unit recruitment, and fatigue are discussed. Mechanisms of adaptation in skeletal muscles and the biomedical adaptations produced by increased and decreased use are also discussed, with emphasis on cell signaling and genomics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** KINS 5311.

**KINS 9204. Cellular Adapt to Exer. 3 Credit Hours.**

This course examines control and regulatory mechanisms at the tissue and cellular levels during exercise. Mechanisms of adaptation in cells and tissues and the biomedical adaptations produced by training are discussed, with emphasis on genomics and cell signaling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** (KINS 4311 or KINS 5311) and KINS 9203.

**KINS 9205. Exercise Testing and Prescription. 3 Credit Hours.**

This course enhances the knowledge and skills of persons interested in preventive and rehabilitative exercise programs. Exercise in the diagnosis, prevention, and rehabilitation of coronary heart disease, as well as the techniques of exercise stress testing are studied. Emphasis is placed on the development of exercise prescriptions from graded exercise test data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9287. Athletic Training/Sports Medicine Practicum I. 1 to 6 Credit Hour.**

This is a practicum in which the student satisfies the 200-hour requirement by serving as an athletic trainer in a NATA-approved allied-health setting such as the Temple University Sports Medicine Clinics. Students perform athletic training duties under the supervision of certified athletic trainers and orthopedic surgeons.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9288. Athletic Training/Sports Medicine Practicum II. 1 to 6 Credit Hour.**

As a continuation of KINS 9287, in this practicum the student further satisfies the 200-hour requirement by serving as an athletic trainer in a NATA-approved allied health setting such as the Temple University Sports Medicine Clinics. Students perform athletic training duties under the supervision of certified athletic trainers and orthopedic surgeons.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9301. Motor Development. 3 Credit Hours.**

This course is designed to study human movement across the lifespan through the review and critique of major theoretical positions and the analysis of selected movement patterns.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9302. Motor Learning. 3 Credit Hours.**

This course is designed to study the acquisition and retention of motor skills as related to practice schedules, information processing, and motor control.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9311. Biomechanics: Human Movement. 3 Credit Hours.**

This course offers an assessment of research in the biomechanics of human motion, including electromyography, muscle modeling, link segment modeling and analysis, and energy and power analysis. The above concepts are utilized in the assessment of both normal and atypical populations in sport and rehabilitation contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9401. Psychological Bases of Motor Behavior. 3 Credit Hours.**

This course focuses on the psychology of motor behavior, with particular emphasis on motor learning and motor development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9402. Psychology of Human Motivation and Development. 3 Credit Hours.**

This course focuses on the basic psychological variables that influence, and are influenced by, human movement. A diverse set of topics within exercise and sport psychology is explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9403. Sociology of Kinesiology. 3 Credit Hours.**

This course focuses on the social structural/contextual variables that influence, and are influenced by, human movement. Among the variables examined are socioeconomic status, gender, race, ethnicity, sexual preference, dominant-subordinate perceptions, and value formation and conflict.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9404. Exercise and Mental Health. 3 Credit Hours.**

This course provides the student with a background in theory, research, and applied work in the relationship between exercise and mental health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9407. Obesity and Eating Disorders. 3 Credit Hours.**

This course aims to provide a comprehensive understanding of obesity and eating disorders. It focuses on kinesiology and its relation to the etiology of the disorder, its prevalence, classification, diagnosis, treatment and prevention. These issues are discussed in terms of their psychosocial, behavioral, and physiological aspects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9683. Mentored Research I. 3 Credit Hours.**

This course exposes the Ph.D. student to the basic nature of behavioral and somatic science research. Learning experiences consist of journal article review, laboratory/field techniques, and subject or data collection exposure as directed by faculty mentors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9783. Mentored Research II. 3 Credit Hours.**

This course provides the Ph.D. student with the opportunity to be involved in research, under the direction of the faculty mentor, as the assistant project director and as the project director for pilot studies. The student gains experience in these roles with close supervision by the faculty mentor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in KINS 9683.

**KINS 9785. Internship in Kinesiology. 3 to 6 Credit Hours.**

This course provides supervised field and/or clinical experiences in psychological aspects of sport/physical activity, and exercise science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9882. Independent Research. 1 to 12 Credit Hour.**

This course allows students to engage in independent research. Students present a proposal to the instructor, who advises them on their project. Prior to registration, students obtain a letter of agreement from the department chair indicating the number of credits involved.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9901. Research Methods in Kinesiology. 3 Credit Hours.**

This course focuses on basic understanding of research methods and related techniques necessary to evaluate research literature in physical education and related fields. Attention is given to the selection of research problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**KINS 9994. Preliminary Examination Preparation. 1 to 3 Credit Hour.**

This course is for students who have completed all coursework and have not passed the preliminary examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9995. Master's Research in Kinesiology. 1 to 3 Credit Hour.**

This course is open to Master of Science candidates doing either the project option or the first three credits of the thesis option.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9996. Master's Thesis in Kinesiology. 1 to 3 Credit Hour.**

This course is open only to Master of Science candidates completing the last three credits of the thesis option.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may be repeated for additional credit.

**KINS 9998. Dissertation Proposal Research. 1 or 2 Credit Hour.**

This course supports preparation of the dissertation proposal. The course is required for students who have passed the preliminary examinations for their PhD program and who have not yet defended the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in KINS 9994.

**KINS 9999. Doctoral Dissertation in Kinesiology. 1 to 9 Credit Hour.**

This course is limited to candidates for the doctoral degree. This offers continuous registration during the fall and spring terms as required from after completion of the preliminary examination until the dissertation has been completed and accepted by the graduate faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Landscape Architecture (LARC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **LARC 5085. Landscape Architecture Internship. 1 to 3 Credit Hour.**

This course expands students' knowledge and professional experience through internships in landscape design, ecological restoration, horticulture, or a related field. Students will be exposed to methods of practice and design thinking and have the opportunity to integrate academic learning with practical work experience, thereby broadening his or her skills and perspectives. The course requires that the student prepare a report in a format agreed upon with the course coordinator.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Landscape Arch.

**Repeatability:** This course may be repeated for additional credit.

### **LARC 5544. Landscape Architecture Computer Technology I. 3 Credit Hours.**

An introduction to modeling, mapping, drafting, and representation software that is currently used in landscape architectural practice. Focuses on learning the basic commands for drawing, rendering, and formatting digital representations of work for presentations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **LARC 5551. Landscape Architecture Computer Technology II. 3 Credit Hours.**

Builds upon computer knowledge introduced in Design Communications/Introductory Design Studio I or equivalent. Introduction to Geographic Information System (GIS), intermediate level computer-aided design (CAD), and Photoshop applications to aid in developing and presenting designs. How to select the most useful software for a particular design problem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **LARC 5564. Landscape Architecture Computer Technology III. 3 Credit Hours.**

Addresses more advanced concepts within and between drafting, rendering, modeling, mapping, and representation software that are commonly employed in landscape architectural practice. Products are project-based and prepare students for professional standards.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D (except where noted) in (LARC 1544 or LARC 5544 (C- or higher))

### **LARC 5665. Grant Writing. 3 Credit Hours.**

Develop skills in researching grant funding possibilities, identifying and developing appropriate restoration projects with potential for grant funding, and writing grant proposals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **LARC 8141. Design Communications/Introductory Design Studio I. 4 Credit Hours.**

This studio course explores the development of graphic techniques and introduces students to the design process commonly used in landscape architecture and horticulture. Students develop a small-scale design project using a variety of graphic skills. Plans, sections, and elevations are drawn, and their functions are understood in design representation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8144. Landscape Design Studio II. 4 Credit Hours.**

This course focuses on the development of mixed use and sustainable communities within the natural, social, cultural, and economic context of development or redevelopment. Large-scale land-use and community planning projects in the urban or rural context are investigated. Real world projects range from preparing community-based revitalization plans and designs for inner-city neighborhoods, to the creation of a new town development set in a bucolic landscape. Students learn to develop creative ideas through illustrative techniques. They engage in a complete design process, including analysis, conceptual, and finished design of an outdoor space.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in LARC 8141.

**LARC 8151. Woodland Design Studio. 4 Credit Hours.**

Students apply the knowledge and methodologies presented in LARC 8751: Northeastern Woodland Ecosystems. Projects, varying in size and location, allow students to synthesize and advance their understanding of the ecosystem. Finished design projects are presented in graphic, written, and verbal forms and may be implemented in the field. Students develop the analytical and technical skills necessary for the inventory, analysis, programming, and design of a woodland landscape. Fieldwork, site inventory and analysis, identification of opportunities and constraints, and program development, as well as hand and computer drawing, are included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** LARC 8351, LARC 8751.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8152. Wetland/Riparian Design Studio. 4 Credit Hours.**

This studio course complements material introduced in LARC 8752: Wetland Ecology. Students are required to draw on and implement knowledge about wetland ecosystems to develop a site design. Field visits, inventory, analysis, and monitoring are used to gain a thorough knowledge of the site for use as the basis for a design. Identification of opportunities and constraints, program development, and hand and computer drawing are extensively used. Students learn the critical thinking and artistic judgment necessary for developing a design for wetland habitat restoration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** LARC 8752.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8153. Public Lands Design Studio. 4 Credit Hours.**

Focuses on a public project, such as a metropolitan park or regional or state conservation area. Students are required to understand and integrate the diverse values and views held by various stakeholders. In addition to typical design studio components such as site inventory and analysis, projects may require students to interview, confer, and present to public audiences to seek feedback and approval of designs. By the end of the course, students have attended and/or presented at public meetings and have developed a design for the public realm.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8241. Landscape Engineering I. 3 Credit Hours.**

The course emphasis is on the basic concepts, ideas, and techniques that deal with the visual, functional, and ecological aspects of grading and landform manipulation. Students learn the technical skills necessary for grading a landscape to ensure proper drainage.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8242. Landscape Engineering II. 3 Credit Hours.**

This course is an introduction to the principles, processes, and techniques of landscape architectural site engineering. Based on the understanding of ecological principles, functional requirements, and aesthetic considerations, students learn essential elements of construction drawings that are typically required for implementation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in LARC 8241.

**LARC 8351. Aesthetics of Ecological Design Seminar. 1 Credit Hour.**

Students learn about the emerging aesthetic associated with ecological design. Form and psychological experience of design are presented through readings and discussion. Students understand the importance of peer-reviewed research as it relates to design and aesthetics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** LARC 8151, LARC 8751.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8355. Capstone Seminar. 1 Credit Hour.**

The LARC 8355 Capstone Seminar is an introduction to, and preparation for LARC 9995, Capstone Restoration Design Project. The Capstone Seminar objectives include defining the research topic and specific project site, in addition to establishing the scope and goals of the proposed project. Students conduct a thorough site inventory and analysis, identify research resources and precedents, contact site stakeholders and formulate a design program. All these components are further developed in LARC 9995 in the following spring semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Landscape Arch.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (LARC 5551, LARC 8151, LARC 8152, LARC 8153, LARC 8242, LARC 8351, LARC 8751, LARC 8752, LARC 8789, and LARC 8552)

**LARC 8496. Landscape Traditions. 3 Credit Hours.**

A comprehensive overview of civilization's efforts to create useful, beautiful, and symbolic spaces and places from ancient times until the modern day is presented. Students learn to critically assess landscapes through written research papers and oral presentations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8552. Research Design Methods. 3 Credit Hours.**

Master of Landscape Architecture students gain an understanding of research design methods. Students conduct a research project and write a paper that summarizes their research study and findings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LARC 8644. Professional Practice. 3 Credit Hours.**

This course focuses on codes of professional and environmental ethics, the requirements of professional licensure, current business practices, and current and emerging challenges in landscape architectural practice. The course emphasizes the leadership role of landscape architects on interdisciplinary design teams. Students gain an understanding of different professional avenues and opportunities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (LARC 8141 and LARC 8241)

**LARC 8751. Northeastern Woodland Ecosystems. 3 Credit Hours.**

The course presents terrestrial forest ecosystems and the biotic and abiotic factors that affect them. Students learn the components of forest ecosystems, including degradation factors and restoration concepts. Field trips allow students to observe and document a local forest ecosystem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** LARC 8151, LARC 8351.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8752. Wetland Ecology. 3 Credit Hours.**

The course introduces the ecology of traditional wetlands, such as salt marshes and bogs. Students gain an understanding of riparian edges and shorelines and the measures necessary for protecting and/or restoring them. Site visits are required.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Landscape Architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** LARC 8152.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8755. Native Plant Communities. 3 Credit Hours.**

The course examines native and naturalized tree, shrub, and/or herbaceous plant community structure. Restoration processes are explored relevant to maintaining healthy plant communities. Discussion centers around growth, habit, and on-site propagation during restoration. Students learn to distinguish between native and non-native plant communities and vital characteristics associated with plant community health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8789. Landscape Restoration Workshop. 3 Credit Hours.**

Students learn principles and practices of ecological restoration through hands-on experience. They visit restored landscapes, conduct field measurements in a unique ecosystem and contribute to a restoration project on a local site(s). By the end of the course, students understand various technical strategies involved in restoration through drawing and writing their field observations, assessing proper techniques for restoration, and then implementing those techniques on a real site.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 8860. Topics in Landscape Architecture. 3 Credit Hours.**

Variable offerings from semester to semester of selected topics not part of the regular listing of courses. The topic can be in an area of specialization of a faculty member or an examination of a current development in the field. NOTE: Students may obtain a description of the current version at the department office and in the schedule of classes. This course may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may be repeated for additional credit.

**LARC 8870. Topics in Landscape Architecture. 1 to 3 Credit Hour.**

Variable offerings from semester to semester of selected topics not part of the regular listing of courses. The topic can be in an area of specialization of a faculty member or an examination of a current development in the field. NOTE: Students may obtain a description of the current version at the department office and in the schedule of classes. This course may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**LARC 8889. Invasive Species Management and Restoration Monitoring. 3 Credit Hours.**

This field course introduces methods for monitoring the process of a restoration project and the corrective actions needed to ensure a positive restoration. It includes strategies for pre- and post-installation monitoring. By the end of the semester, students understand issues associated with monitoring and maintaining the health of a restored ecosystem.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Landscape Architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Landscape Arch.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LARC 9883. Directed Reading/Study. 1 to 3 Credit Hour.**

Advanced reading/study tutorial is arranged between the student and a faculty member. NOTE: A written contract with the faculty member and approval from the Chair of the Department are required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LARC 9995. Capstone Restoration Design Project. 1 to 3 Credit Hour.**

Students develop an independent restoration design project requiring synthesis of all previous coursework, including methodologies, seminars, ecological knowledge, and design projects. Every project must incorporate research in three ways: (1) accomplishing a literature review; (2) selecting and applying a methodology; and (3) advancing the knowledge base in ecological restoration. Research is used to both guide and test the design project. Students develop a comprehensive report. The capstone project concludes with a verbal and graphic presentation as well as a report summarizing the implications of the design, including strategies for monitoring and adjusting the restoration over time. Note: Students must obtain the instructor's approval of a project site and type no later than the first week of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Landscape Architecture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Landscape Arch.

**Course Attributes:** SF

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C- in LARC 5551, LARC 8151, LARC 8152, LARC 8153, LARC 8242, LARC 8351, LARC 8355, LARC 8552, LARC 8751, LARC 8752, LARC 8755, LARC 8789, and LARC 8889.

## Latin American Studies (LAS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**LAS 5001. Process and Change in Latin America. 1 to 9 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Legal Studies (LGLS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**LGLS 5051. Business Law. 1.5 Credit Hour.**

This course provides an overview of contract law, the foundation of all business law, with special attention given to issues often encountered by business executives. In addition, a broad range of ethical workplace dilemmas will be covered. Topics include sources of law, the organization of the United States legal system, selected issues in domestic and international contracts, diversity in the workplace, privacy and technology, and whistle-blowing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5103. Real Estate Law and Practice. 3 Credit Hours.**

This course merges two disciplines (i.e., law and real estate) and provides students with an overview of the legal aspects associated with key documents that are part of the real estate investment. Documents including loan, joint venture and leases will be reviewed. We then evaluate the impact of business and legal terms on the proforma. To this end, we expose the students to how to read to understand the key documents for any real estate transaction. Each will be presented in a format that will provide students the over-arching terms both legal and business that are then used to form the basis for the impact of same on the performance of an investment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5131. Environ Law & Corp Resp. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5155. E-Commerce Law & Regulation. 1.5 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5170. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LGLS 5180. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LGLS 5182. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LGLS 5190. Special Topics - Law. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LGLS 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LGLS 5602. Ethics in the Public and Commercial Sectors. 3 Credit Hours.**

This course will provide an overview of the study of ethics and its operations in the public and commercial sectors. It will emphasize the identification and analysis of ethical issues in the regulatory and corporate contexts and examine the roles of government and business in society, focusing upon its various stakeholders, including government regulators, consumers, corporate actors, employees, and local/national/global communities. It will also dissect the ethical dimensions of ordinary regulatory and corporate decision-making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5603. Public Policy and Regulatory Process. 3 Credit Hours.**

The course will introduce students to the study of public policy - that which addresses the interests of the public and fuels the creation of national, state and local laws, as well as internal codes of corporate conduct. The course will assist students in comprehending how public officials make decisions that positively and negatively affect people's lives in the public and private sectors. The course will examine how problems reach the government's agenda, why some solutions are embraced and others rejected, and why some policies seem to flourish while others flop. Students will be encouraged to intelligently analyze policies, find their strengths and weaknesses, and apply knowledge of the policy process to any issue confronted in daily life. Students will also understand how legislation is proposed and passed, how legislation is enforced, and how stakeholders can affect the ultimate acceptance or rejection of a proposed policy or regulation. Additionally, students will understand the dynamic nature of public policy by comparing prior policy, legislation, and public attitude with that of the modern world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5604. Corporate Compliance. 3 Credit Hours.**

This course provides an overview of the world of corporate compliance. The Compliance Officer's ability to investigate wrongdoing at the workplace, through internal investigations and audits, will be explored, along with case study exercises that involve the interaction between corporate entities and federal and state agencies. Students will analyze the interrelationships between the public and private sectors and the nature of legal liability for business entities and their employees. The course will also emphasize the creation and maintenance of corporate compliance programs, codes of conduct and policies, with drafting and critiquing exercises. Substantive course topics include: corruption, workplace discrimination, data privacy, trade control, and environmental risk.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5605. Corporate Governance and Responsibility. 3 Credit Hours.**

This course will provide an overview of corporate governance, the systems, principles and processes by which corporations are directed and controlled. It will explore inter-related governance structures (e.g., the relationships between and among boards of directors, management, shareholders in contemporary business organizations) and analyze how companies can be directed such that they satisfy their objectives in a way that builds value and benefits stakeholders. It will analyze the intersection of responsible management and good public policy. Students will consider how a business organization can build and sustain a culture that is supportive of ethical decision-making, both internally and in relation to the political process. Students will look at the kinds of ethical dilemmas that confront managers, at the pressures that can cloud good judgment, and at mechanisms for communicating best ethical practices across an organization. As they analyze a series of business ethics case studies, students will weigh possible action choices in light of both relevant law and market imperatives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5606. Forensic Accounting. 3 Credit Hours.**

This course explores the growing field of forensic and investigative accounting. Students will be introduced to the basic concepts of auditing, internal control, valuation, fraud examination, and litigation support. The objectives of this course include understanding the principles and practices that guide accountants, financial professionals, and Certified Fraud Examiners.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5607. Global Public Policy and Business. 3 Credit Hours.**

Public policy refers to the relationship between the government and the governed. This relationship includes the complex array of statutes, regulations, and often judicial decisions that affect the actions of ordinary citizens by guiding their behavior and providing ramifications for acting outside of socially accepted norms. Policies reflect the values and beliefs of a specific community, whether local, regional, national or international. Businesses are also affected by these policies. The behavior of firms, of their employees, and of their governing institutions, are driven by policies developed by government actors. Policies for businesses are most often reflected in the form of regulations, which guide firm behavior with respect to financing, labor standards, transparency, interaction with the environment, and so forth. Debates rage about whether a strong regulatory environment facilitates effective economic development with a consumer focus or whether it restricts economic growth potential. In this course, we will examine business-relevant issues within the global public policy environment. We will compare and contrast the regulatory environments of distinct countries to that of the United States in order to judge effectiveness, viability, and the relationship between that environment and business growth. This class will be case study intensive and will require students to apply deep critical analysis skills as they read course materials and complete assignments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5611. Compliance in the Financial Services Industry. 3 Credit Hours.**

This course focuses on the regulatory landscape concerning the financial services industry. Students will learn about the basic regulatory principles guiding financial institutions, as well as modern changes to be implemented as a result of the recent financial crisis. Additionally, students will learn about the intersection between the different regulatory bodies that oversee both public and private financial institutions. Specific topics to be discussed include: the Dodd-Frank Act, the Glass-Steagall Act, the Gramm-Leach-Bliley Act, and the Right to Financial Privacy Act.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5612. Ethics in the Financial Services Industry. 3 Credit Hours.**

This course explores ethical issues in the financial services industry. The need for ethical practices in the financial services industry has been repeatedly discussed following the recent financial crisis. Students will discuss the often-unclear boundaries between ethical and legal practices. Students will also explore the relationship between different financial services organizations, shareholders, regulators, and customers. The objective of this course is to prepare students to make ethical decisions that positively affect both their organization and outside stakeholders.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5613. Compliance in Healthcare. 3 Credit Hours.**

This course focuses on the regulatory landscape concerning the healthcare industry. Innovations in technology, an aging population, and the passing of the Patient Protection Affordable Care Act are poised to greatly change the American healthcare industry. Students will learn how these changes will affect their respective organizations. Upon completion of this course, students will be better equipped to serve as effective compliance leaders.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5614. Ethics in Healthcare. 3 Credit Hours.**

This course explores the ethical issues in the healthcare industry. The nature of the doctor-patient relationship in healthcare creates unique ethical issues. Students will learn how to recognize and confront these ethical issues. Through an open discussion and analysis of current events, students will explore the delicate balance between the patient's interests and the business decisions facing modern healthcare providers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5615. Risk Management and Compliance. 3 Credit Hours.**

Risk is a future phenomenon. As part of our eternal quest to control some small component of our future, it is the focus of many business discussions, thus making it an essential part of decision making. The challenge and the focus of the course is on creating a degree of consistency in managing risk and the risk process. The course uses a holistic approach, examining risk as a blend of environmental, programmatic, and situational concerns, covering the latest perspectives, focusing on a systematic approach to risk management. We also focus on specific techniques to enhance organizational risk identification, assessment, and management, all within the project and program environments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5616. Anti-Money Laundering. 1.5 Credit Hour.**

Money laundering generally refers to financial transactions in which criminals, including terrorist organizations, attempt to disguise the proceeds, sources or nature of their illicit activities. Money laundering facilitates a broad range of serious underlying criminal offenses and ultimately threatens the integrity of the financial system. The course reviews the various forms of money laundering and how it may be combated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5617. Sustainability in Business. 3 Credit Hours.**

A sustainable approach to business requires business leaders to transform the traditional linear business production cycles that exploit the environment and produce wastes into a more circular one in which all waste products are used in the production cycle, in an industrial cluster, or returned harmlessly to the earth. Waste reflects inefficiency, pollution risks, and seeking its elimination leads to innovation. The change of perspective is especially necessary today. In the first industrial revolution, humans had abundant resources and limited labor. Now the resources available to businesses are limited and labor (whether human or automated) is abundant. So, business leaders need to learn how to do more with what they have. In the course, we study industrial ecology as means to develop new business models and processes that generate better products, reduce costs, protect the environment, and make money for the firm. In doing so, we study cases and provide students the opportunities to reconsider their own industries and develop entrepreneurial ideas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5618. Compliance in the Government Services Industry. 1.5 Credit Hour.**

The work of corporate governance is divided into two main parts: compliance and ethics. This course focuses on compliance in the government services industry, which includes the rules and regulations that companies have to follow when doing work for the government. That is to operate in the area of corporate governance, one needs to know and put safeguards in place to make sure the company is following applicable rules, including, but not limited to rules against conflicts of interest, drafting codes of conduct, handling employee violations of the code of conduct, and monitoring vendors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5619. Ethics in Government Services Industry. 1.5 Credit Hour.**

This course focuses on ethics in the government services industry, which includes helping students identify and incorporate certain ethical frameworks that they can apply to moral conflicts in business with the government. That is to say, it is not enough to know the rules, one must know how to apply them, why you are applying them and, at times, when to disregard them. The course focuses on ethical issues that specifically arise in the government services industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5622. Law and Policy of the Workplace. 3 Credit Hours.**

Social media and privacy rights. Sexual harassment. Trade secrets and Non-Compete Agreements. Conscious and Unconscious Bias. This course will explore the rights and responsibilities of workers and managers alike by examining the laws, regulations, court cases and policies that govern the employer-employee relationship. It aims to provide you with a basic understanding of workplace law and policy while challenging you to question existing approaches to the employment relationship. The course will use cases and questions currently in the news and in the courts to examine the U.S. approach to the workplace: Should employers control employees' access to birth control or other medical care? Can a company perform criminal background or credit checks on applicants without violating race discrimination prohibitions? How would a mandate of paid time off to care for a new child or ill family member impact a business's bottom line? What role should the government play in setting a minimum wage and how does it affect workers and their employers? This course will ask questions like these to help you understand the way in which compliance with workplace laws impacts numerous aspects of a business and to help you articulate your own view of the employer-employee relationship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5623. Cyber-Security and Privacy. 3 Credit Hours.**

This course introduces students to the interdisciplinary study of cybersecurity and privacy rights. It examines the development of cybersecurity (how we can protect against the criminal or unauthorized use of electronic data) and how this topic relates to the government and business sectors and interfaces with individual privacy rights (i.e., the right of a person to be free from intrusion into matters of a personal nature). Students will investigate national and global legal and policy considerations related to cybersecurity and privacy, including cybercrime, homeland security and cyberwarfare, and how law and policy is created in this arena. In addition, students will study the existing legal frameworks that protect consumer privacy and the security protections for private sector businesses, with strong focus on regulatory and compliance matters.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5701. Legal and Ethical Foundations of Business. 3 Credit Hours.**

Business leader's face values conflicts. This course analyzes economic and moral theories people use to assess whether proposed actions are right or wrong, good or bad, just or unjust. While moral theories can guide our thinking, we explore why they do not always guide our behavior. That brings us to the law. Laws constitute socially imposed incentives and disincentives to encourage people to do what society deems "right". In that way, law represents substantive decisions by the state that are values-based and do not necessarily yield just results. In this course, we come to understand that our laws are not without moral import and that ethics must inform the law because the law in and of itself does little work in informing what should be. It mostly speaks to what is.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5801. Law and Ethics in the Business Enterprise. 3 Credit Hours.**

You will develop greater confidence in managing situations where legal and ethical questions are prominent and where the right decision may not be the easy one to make. As you learn to master online legal research and the basics of business law, you'll discuss actual dilemmas that you've faced at work. As issues involving diversity, surveillance technology, environmental protection, workplace safety, whistle blowing and sexual harassment surface in discussion, you'll gain insight into ways of resolving these complex business problems in both classical and digital enterprises. Note: Enrollment limited to students in the EMBA program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**LGLS 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**LGLS 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## LLM American & International (MLAI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MLAI C001. Amer & Int'l Law Pgm Assess. 0 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**MLAI C005. FLLM Dual Degree. 0 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**MLAI C100. Legal English / Communication. 2 to 3 Credit Hours.**

This course aims to help international students to improve their English language skills, as well as to provide them with an intensive introduction to legal vocabulary and concepts that will be important in their subsequent law school coursework. Attention is given to acquiring and practicing extensive legal English skills by exploring topics in various legal areas, including contract law, tort law, criminal law and other legal concepts in order to expand the students' vocabulary and stimulate class discussions and debate. In addition to participating in daily classroom discussions, students will be required to give short class presentations in English on different legal topics, as well as essay writing and various reading assignments. The main objective of the course is to build students' self-confidence in using English in their law school courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLAI C101. Intensv English Language. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C400. Admnstr TV/Telecommunctns. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C401. Civil Procedure/Evidence. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C402. Civil Procedure I. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C403. Administrative Law. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C404. Constitutional Law. 2 to 3 Credit Hours.**

Judicial review of legislative and executive actions in a constitutional setting, the relationship of the states to the federal government (federalism), the relationship of the people to the government (fundamental rights and due process of law), and the powers of the legislative branch are considered in the context of the US Constitution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C405. Legal Profssnlsm Practcm. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C406. Contracts I. 2 Credit Hours.**

This course provides students with in-depth knowledge of the fundamental principles of contract law. The core elements include formation and creation of the contract, contract terms, contract performance and excuse for nonperformance, breach of contract and remedies for breach, and third party rights. Practical matters such as the principle of party autonomy, legal effect of a contract, and enforcement of contractual rights are emphasized. The teaching methods rely heavily on case analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C407. Criminal Legal Process. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C408. Contracts II. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C414. Legal Research & Writing. 2 to 4 Credit Hours.**

This course teaches the basics of writing like a lawyer. Students learn basic legal research skills and the fundamentals of legal writing. Students will be taught how to do computerized legal research using the Westlaw database.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C415. Legal Research. 1 Credit Hour.**

The objective of this course is to introduce Chinese students to legal reasoning, legal research, and legal writing in English - three of the many necessary skill sets required in the practice of law, especially in the U.S. legal system. Students will be given both reading and hands-on research assignments. They are required to conduct research and write research reports (legal memoranda) for their work. In addition, the instructor will use pairs or groups of cases to help students learn about citation, case reading and analysis, statutory interpretation, and legal synthesis to further appreciate the role of legal research in the practice of law. Overall, students taking this course will experience enhancement in legal reasoning, legal research, and legal writing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C416. Professional Responsibility. 2 to 3 Credit Hours.**

In this course, students will gain a broad understanding of professional responsibility, attorney ethics, and the laws of lawyering. Students will gain proficiency in applying the American Bar Association Model Rules of Professional Conduct, the California Rules of Professional Conduct, the California Business and Professions Code (Selected Provisions), and state law variations of the Model Rules. The course includes topics on the regulation of lawyers, lawyer liability, confidentiality, the lawyer-client relationship, conflicts of interest, and lawyers' duties.

**Class Restrictions:** Must be enrolled in one of the following Classes: Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C417. IP in Cyberspace. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C418. Real Property. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C419. American Legl Sys/Theory. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C420. Torts. 2 Credit Hours.**

This course focuses on the basic concepts of civil liability between private parties, including intentional torts, negligence, and strict liability. It also acquaints students with the potential role of courts in providing individuals who are injured with a means of redress against other individuals, business entities, and government officials. Some specific issues, such as tortious interference with contracts and product liability, are addressed. In addition, the course considers the theoretical basis of civil liability, including providing justice, spreading risk and cost, and deterring socially harmful behavior

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C421. Markets. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C422. Legal Reasoning. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**MLAI C424. International Civil Litigation. 2 to 3 Credit Hours.**

This course will examine the international law that governs "foreign" relations between individuals or business entities, and discuss the theory and practice of international civil dispute settlement. Issues to be covered include determination of the proper forum, finding of the applicable law, judicial assistance (e.g. service of process, discovery and foreign judgment enforcement), and litigation involving a foreign state. Also discussed will be: how to draft a dispute settlement clause in an international contract, how to make a meaningful choice of forum as well as applicable law to more effectively protect client's interest, and what are the potential obstacles facing lawyers engaging in the international practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C430. Electronic Commerce. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C432. Foreign Investment. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C434. Adv Con Law: Econ Rts & Reg. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C449. Business Entities. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C450. Mergers & Acquisitions. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C451. Intro to Trial Advocacy. 2 or 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C466. Intrnl Environmental Law. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C490. Law Electronic Commerce. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C501. Intl Dispute Resolution. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C504. Antitrust Law. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C505. Criminal Procedure. 2 to 3 Credit Hours.**

In Criminal Procedure students will learn about parts of the United States Constitution that impact the rights of criminal defendants in court. Specifically, students will study the impact of the 4th, 5th, and 6th Amendments of the Bill of Rights on criminal cases. Study will focus on both how case law interprets these amendments and the real world impact of those decisions, as viewed through a racial justice framework.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C506. Banking/Financial Instns. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C508. Business Associations. 2 Credit Hours.**

This course examines the law of corporate entities, including the reason for their existence, their functioning in a market economy, and the legal rules that govern their existence. It focuses primarily on the corporation, exposing students to an artificial entity, to corporate governance and management, and to the problems that tend to arise in the ongoing life of a corporation. In that context, the students examine the various types of corporate entities that exist and different assumptions underlying their existence.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C522. Conflict of Laws. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C524. International Commercial Arbitration. 2 to 3 Credit Hours.**

Arbitration is an important alternative dispute resolution mechanism in international business transactions. It is in many respects a form of dispute settlement most often chosen by the parties and their lawyers, and it operates interactively among national legal rules and institutions. This course provides students with the theory and practice of international commercial arbitration with a focus on its jurisprudential underpinnings and legal structures. It examines and analyzes from comparative law aspects both procedural and substantive issues involved in the international commercial arbitration.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C530. Creditors/Debtors Rights. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C540. Evidence. 2 or 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C545. Introduction to Compliance. 2 to 3 Credit Hours.**

This course will discuss the importance of corporate compliance and provide an overview of the legal and ethical considerations at play. The course will also explore relevant laws, examine emerging risks and provide an understanding of the design and implementation of compliance programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C547. Intellectual Property. 2 Credit Hours.**

This course will cover the broad outlines of the four major branches of intellectual property law: patent, copyright, trademark, and trade secret law. The course will look generally at why (and how) intellectual property law differs from the law governing real property or tangible personal property, as well as at the special features of each of these sub-fields of intellectual property law. The course should provide a helpful overview of this area of the law for students who do not plan to specialize in intellectual property, as well as providing those who plan to go on to more detailed study of, and practice in, this area with an introductory exposure to the kinds of problems that are common to all intellectual property disciplines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C554. Intl Investment & Trade. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C556. International Law. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C557. Intervwng Negotng Counsl. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C558. Trial Skills. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C559. Jurisprudence. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C562. Comparative Labor Law. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C565. Adv Trial Advocacy Crmnl. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C568. Family Law. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C583. Intl Protctn Human Right. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C589. Secured Transactions. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C590. Securities Regulation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C600. Taxation. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C622. Sales. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C623. Alt Dispute Resolution. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C625. Labor & Employment Law. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C637. International Business Transactions. 2 Credit Hours.**

This course is designed to give students an understanding of the variety of issues that lawyers acting for clients in international business transactions encounter in their daily work. The first section of the course focuses on the three principal contracts used in international documentary sales transactions: the sales contract, the bill of lading and the letter of credit. Particular attention is given to contract formation issues under private international law and the UN Convention on Contracts for the International Sale of Goods. The course then considers the impact of global trade regulation on private business deals, with an emphasis on customs law as well as the basic principles and evolving case law of the WTO.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C652. Intrnl Commercial Law. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C751. Ethics in Practice. 1 to 4 Credit Hour.**

This course will focus on issues of professionalism and ethics. Students will learn about attorney obligations to the client, court, profession, and society, and develop an understanding of their own professional values and philosophy as practicing lawyers. In addition to examining global issues of ethics and professionalism, the course will utilize students' experiences to identify and explore issues particular to different areas of practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C850. Jurisprudence. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C876. Mergers & Acquisitions. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLAI C900. Guided Research. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLAI C921. Law Electronic Commerce. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## LLM Freedman Fellows (MLFF)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MLFF F810. Teaching Methodology: Legal Research and Writing. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLFF F820. Teaching Methodology: Collaboration. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLFF F830. Teaching Methodology: Upper Level Instruction. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLFF F890. Thesis (Freedman Fellow). 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

## LLM Taxation (MLTX)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MLTX 0412. Transfer Credit. 1 to 12 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0501. Taxation 1. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0502. Tax of Capital Trans.. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0503. Timing: Rec of Income/Ded. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0504. Income Tax. of Invest.. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0505. State & Local Taxation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0506. Tax Aspects Intnat Trans. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0507. International Tax Plann.. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0508. Compliance and Penalties. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0509. Tax of Compensation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0511. Estate and Gift Taxation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0512. Income Tax-Trusts/Estate. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0513. Estate Planning I. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0514. Exempt Organizations. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0515. Estate Planning II. 1 to 2 Credit Hour.**

This course examines the advanced planning techniques for charitable giving, the generation-skipping tax, qualified and non-qualified employee benefits, private business buy outs and similar transactions, grantor retained trust interests, use of a business as an estate planning tool, life insurance, elderly and disabled persons and divorce and non-traditional relationships. In addition, the drafting of irrevocable trusts (including Crummey powers), shareholder agreements, partnership agreements and valuation techniques, are covered.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0516. Planning-Family Business. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0520. Real Estate Taxation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0521. Partnership Taxation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0522. Corporate Taxation I. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0523. Corporate Taxation II. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0524. Tax S Corps. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0525. Qual Employee Bene Plans. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0526. Business Planning. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0527. Tax/Affiliated Corpportns. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0530. Tax Policy. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0531. Tax Procedure. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0532. Adv. Income Tax Problems. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0533. Adv Corp Tax Problems. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0534. Advanced Pension Problem. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0536. Tax in Debt Workouts. .2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0539. Corporate Taxation II. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0547. Compliance and Penalties. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0641. Law. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0800. Business Planning. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0801. Intro Employee Benefits. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0905. PA Workmen's Comp. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0907. Strikes, Pick, Lock, Boycots. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0908. PA Workers Comp Law II. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0917. Union Unfair Labor Prac. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0918. Fair Labor Standards Act. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0919. Representation and Cert. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0921. Fed Emp Labor Relations. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0928. Federal Labor Practice. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0929. PA Public Emp Rel Act. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0936. Accounting for Lawyers. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**MLTX 0940. Employer Unf Labor Prac. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0941. Labor Contracts and Neg. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0960. Employment Discrim. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0961. Labor Arb and Litigation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0962. Labor Mgmt Rptg Disc Act. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0963. Labor Research. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0964. Age Discrimination. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0965. Crit Issues in Labor Law. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0979. Negotiated Emplée Comp. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0980. OSHA Of 1970. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0981. Equal Pay in Employment. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0997. Tax Planning Seminar. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0998. Guided Research. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX 0999. Tax Research. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G100. Legal English/Communctn. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may be repeated for additional credit.

**MLTX G403. Graduate Law Division. 1 to 15 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G406. Contracts. 3 to 4 Credit Hours.**

Topics may include: the bargain, fairness, equality of the bargain and formalisms such as parole evidence and Statute of Frauds are examined in the context of the common law and Article 2 of the Uniform Commercial Code. Further utilizing the Uniform Commercial Code, the common law and other statutory bases, impossibility, change, condition, anticipatory breach, good faith duty to act, judicial remedies, controlling risk and remedy, third party beneficiaries and assignment are examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G414. Legal Research & Writing. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G415. Legal Research and Writing II. 2 to 3 Credit Hours.**

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G422. Introduction to the American Legal System. 2 to 3 Credit Hours.**

Provides the student from a non-common law background with an introduction to the basic concepts, structures and institutions of the American Legal System. Topics include: common law method and its origins; structure of the US government; the Constitution; judicial review, structure, organization and operations of courts in the US; civil litigation, case analysis and precedent; the legislative branch; statutes and legislative history; the executive branch; administrative law; an introduction to basic contract law and tort law.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G460. International Politics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G463. Intrnl Organizations. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G468. Topics in Intl Politics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G500. Non Tax Issues/Est Plang. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may be repeated for additional credit.

**MLTX G501. Introduction to Employee Benefits. 2 Credit Hours.**

This course is an introductory course about employee benefit law which will prepare students for the more specialized courses on welfare plans and qualified retirement plans to be offered in subsequent semesters. This course covers the broad range of all aspects of employee law in an introductory fashion including; the origins and fundamentals of the U.S. pension system; the history of ERISA law making and the basic concepts of vesting and nondiscrimination in employee plans; ERISA fiduciary law; and the application of other related laws such as ADA, ADEA and Title VII to employee benefits. The goal of the course is to equip students with the basic historical and theoretical knowledge of employee benefit law and ready them for more specialized studies in this area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G502. ERISA/Fiduciary Provsns. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G503. Crim Tax Litigatn/Procdr. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G504. IRS Collections. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G505. State and Local Taxation. 2 Credit Hours.**

Issues relating to state and local income, property and privilege taxes form the basis of discussion in this course. Pennsylvania and Philadelphia laws imposing taxes on individuals and corporations are used as a focus for the treatment of the theoretical concepts involved.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G506. Intl Taxation-Inbound. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G507. Intl Taxation-Outbound. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G509. Taxation of Executive Compensation. 2 Credit Hours.**

This course explores the federal income and social security tax ramifications of special techniques designed to compensate executives including the use of non-qualified deferred compensation plans, rabbi and secular trusts, performance unit plans, phantom stock plans, stock appreciation rights, restricted stock, stock options and other arrangements including golden parachute rules and million-dollar deduction limitations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G512. Income Taxation of Estates and Trusts. 2 Credit Hours.**

This course examines the provisions that determine the income tax liability of trusts, estates and their beneficiaries and emphasizes distributable net income, the distribution deduction and issues involving grantor trusts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G513. Estate Planning I. 2 Credit Hours.**

This course addresses issues of accumulation, conservation and distribution of wealth will be addressed in this course. It examines the applicability of various pre and postmortem estate planning tools and techniques including wills, trusts, life insurance and inter-vivos transfers, together with the tax consequences which arise from their use. The generation skipping tax and the valuation problems encountered in planning and administering an estate are studied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G514. Taxation of Exempt Organizations. 2 Credit Hours.**

This is in-depth study of organizations exempt from federal income taxation and some related subjects. The conditions of tax exemption under Sections 501 to 503 and the various types of organizations granted exemption under these sections are discussed. Particular attention will focus on Section 501(c)(3) entities, the problems of obtaining and maintaining tax exempt status, unrelated business income, and the classification thereof. The taxation of exempt health-care organizations and their for-profit affiliates, and the tax aspects of charitable contributions to exempt organizations - outright gifts, bargain sales, and gifts of partial interests - will also be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G515. Estate Planning II. 2 Credit Hours.**

This course examines the advanced planning techniques for charitable giving, the generation-skipping tax, qualified and non-qualified employee benefits, private business buy outs and similar transactions, grantor retained trust interests, use of a business as an estate planning tool, life insurance, elderly and disabled persons and divorce and non-traditional relationships. In addition, the drafting of irrevocable trusts (including Crummey powers), shareholder agreements, partnership agreements and valuation techniques, are covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G516. Business and Estate Planning Involving Closely Held Businesses. 2 to 3 Credit Hours.**

This course will address the factors that must be considered in advising the family owners and operators of a business. A case study will provide the basis for discussions throughout the semester. Each week, various aspects of the planning problems confronting the hypothetical family owners and operators will be explored and potential solutions plotted. The seminar has been designed to provide insight into the interrelationship of various areas of substantive law and the conflicting needs and agendas of the members of our hypothetical family. The substantive areas that will be examined in detail will include: form of business entity; business prerequisites; buy-sell arrangements; transfers to family members; control and operational issues; family investments outside the business; valuation of the business; and family personality dynamics.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600 and (MLTX G513 or MLTX G803)

**MLTX G518. Introduction to Tax and Legal Reasoning. 1 to 3 Credit Hour.**

This course will introduce students to the principles, policies, and structure of the federal income tax system. It covers basic concepts of federal income taxation by studying the Internal Revenue Code, Treasury regulations and sub-regulatory pronouncements, and the judicial opinions, (decisional law) of different courts. Students will examine these authorities in the broader context of the structure of federal government, which informs their relative power and how they interact. Students will develop a foundation of core federal income tax law principles by asking: What is the item? (Does an item of receipt or increase in value constitute income or does an item of expenditure or loss constitute a deduction?) Who is the taxpayer? How is the item of income or deduction characterized? When was the income realized or the deduction allowed? Students will appreciate that the tax Code provides both a source of revenue collection and authority for government to make appropriations to address federal economic and social policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G520. Real Estate Taxation. 2 Credit Hours.**

In this course, students explore the tax considerations of acquiring, constructing, owning, leasing and disposing of real estate for business use, personal use or as an investment and as a tax shelter. Financing techniques, sale-leaseback transactions, cooperatives, condominiums, certified historic structures, and real estate investment trusts are covered. Emphasis is given to the analysis of tax and economic projections.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G521. Taxation/Partnerships. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G524. Business Planning. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G525. Qualified Employee Benefit Plans. 2 Credit Hours.**

Students will analyze both the tax and non-tax aspects of qualified pension, profit-sharing and stock bonus plans. Particular emphasis is placed on the effect of the Employee Retirement Income Security Act of 1974 (ERISA), as amended, on such plans. Consideration is given both to designing and drafting new plans and to amending existing plans to conform to the law. Filing and disclosure requirements, fiduciary liability and responsibility, and prohibited transactions are also covered. This course examines the consolidated return regulations in detail. The consequences of filing such returns and the effect on net operating losses, basis, intercompany transactions, excess loss accounts and the acquisition, disposition or liquidation of a member of a consolidated group are studied. The course also examines other problems which face affiliated groups of corporations even when they do not file consolidated returns.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G526. Welfare Benefit Plans. 2 Credit Hours.**

This course will cover tax issues employers encounter in providing benefits to their employees. Topics will include tax issues affecting medical, disability, severance and life insurance benefits; tax issues affecting funded welfare plans (such as VEBA's); cafeteria plans; COBRA/HIPPA and other legislation affecting medical plans; coordination of benefits issues including Medicare Secondary Payor rules; and Subrogation rules and other administrative issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G527. Tax-Affiliated Corporations. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G528. Civil and Criminal Tax Penalties. 2 to 3 Credit Hours.**

This course will focus on civil penalties and criminal sanctions which the Internal Revenue Service may pursue against a taxpayer as well a tax professional (including attorneys; accountants; and real estate, art, and business valuation appraisers) for running afoul of obligations mandated by the Internal Revenue Code and related statutes.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600.

**MLTX G529. Tax Practice from the In-House Perspective. 1 to 4 Credit Hour.**

It is more common than ever for the modern corporation to participate in global markets. The in-house tax practitioner must be comfortable identifying and addressing a broad range of tax issues across the globe. These include indirect taxes, transfer pricing, new international regimes and foreign local practice. The in-house tax practitioner also needs a command of issues at the intersection of tax and business, such as tax operations and tax reporting on financial statements. This course gives students familiarity with concepts and terminology relevant to in-house practice, allowing students to prepare for and assess the desirability of an in-house career or to interact more effectively with in-house practitioners from a position at a law firm, accounting firm or in government.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0600 or MLTX 0501)

**MLTX G531. Tax Procedure. 2 Credit Hours.**

Students explore various procedural problems involved in practice before the Internal Revenue Service, the Tax Court and the U.S. District and Claims Courts in processing and litigating civil tax cases as well as certain other matters. The organization of the Internal Revenue Service, requests for rulings and the summons power of the Internal Revenue Service also will be reviewed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G534. State and Local Tax Controversy. 2 to 3 Credit Hours.**

This course will examine state and local tax controversies, including audits, administrative and judicial appeals, and important constitutional challenges related to state and local taxes. The first half of the course will focus on managing a state tax audit examination and challenging an audit assessment through the appeals process. Students will analyze common corporate income tax and sales and use tax issues raised in audit examinations. They will also learn the benefits of voluntary disclosure agreements and amnesty programs as options for coming into compliance with state and local tax filing obligations. The second half of the course will focus on constitutional challenges to current state and local tax issues, including issues related to the Commerce Clause, Due Process Clause, Equal Protection Clause, Supremacy Clause and even the First Amendment, which can weave its way into state and local tax cases. This half of the course will also address the prospectivity, retroactivity and remedy that occur once a tax is found to be unconstitutional. Towards the end of the course, students will apply what they have learned throughout the semester in a mock administrative hearing.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0600 (may be taken concurrently)

**MLTX G539. Adv Corporation Taxation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G540. Adv Partnership Taxation. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G547. Compliance and Penalties. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G548. Tax Treaties. 1 to 4 Credit Hour.**

Tax treaties not only determine what income is subject to tax in a jurisdiction, but they also shape economic decisions and multinational structures. This course will discuss the benefits provided by, and the policies underlying, the US income tax treaty network and provide a framework for analyzing who is eligible for those benefits.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0935 (may be taken concurrently) or MLTX G571 (may be taken concurrently))

**MLTX G549. Business Intelligence. 1 to 4 Credit Hour.**

Data is a core building block of modern organizations; transforming data into information and knowledge enables firms to improve tax compliance and make better planning choices. In this course, students learn best practices for acquiring, assessing, and analyzing data to solve tax-related problems. Students gain hands-on experience with these concepts through case studies and exercises utilizing various hands-on access to technology. Students will also gain skills in understanding the principles of transaction-oriented data, and how information is stored and retrieved from a data source, apply data mining and business intelligence techniques to solve tax-related problems, and understand and select appropriate data visualization techniques to effectively communicate results.

**Class Restrictions:** Must be enrolled in one of the following Classes: Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0600 or MLTX G518)

**MLTX G570. Legal Accounting. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G571. International Taxation. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G572. Intl Tax II: Joint Ventures. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G591. Social Legislation: Law and the Elderly. 2 to 3 Credit Hours.**

This course examines the specific programs and the implications of social politics and principles that affect the elderly. Topics to be considered include public entitlements/benefits programs, income maintenance, health care, guardianship and long term care.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G641. Taxation II. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G651. Accounting for Income Taxes. 2 to 3 Credit Hours.**

Accounting Standards Codification (ASC) 740 is the 2009 codification of Generally Accepted Accounting Principles regarding income taxes. It covers fundamental issues such as how to measure income tax expense each period, how to report the difference between the amount shown as income tax expense on the income statement and the amount of income taxes actually paid based on taxable income, and how to evaluate and reflect tax positions that may or may not be sustained upon examination and subsequent appeal or litigation. This course introduces ASC 740 and provides students with foundational knowledge about preparing and analyzing the financial statement accrual of income taxes considering the applicable accounting standards, tax laws, and financial statement presentation principles for tax expense, deferred taxes, and footnote disclosures. In particular, students will learn about temporary differences, deferred taxes, taxable income, valuation allowance, uncertain tax positions, interim reporting, international tax, and other relevant topics.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Course Attributes:** ANON

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in JUDO 0511.

**MLTX G801. Intro Employee Benefits. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G802. ERISA/Fiduciary Provisions. 2 to 3 Credit Hours.**

This course will focus on the fiduciary and investment management considerations for employee benefit plans under ERISA, primarily on Title I, Part 4 of ERISA.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G803. Estate Planning I. 3 Credit Hours.**

This writing seminar addresses issues of accumulation, conservation and distribution of wealth will be addressed in this course. It examines the applicability of various pre and postmortem estate planning tools and techniques including wills, trusts, life insurance and inter-vivos transfers, together with the tax consequences which arise from their use. The generation skipping tax and the valuation problems encountered in planning and administering an estate are studied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G804. Tax Provsn Corp Acquistn. 2 or 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G805. Drafting and Analyzing Fundamental Estate Planning Documents. 2 to 3 Credit Hours.**

Students will learn to draft fundamental estate planning documents (wills, trusts, financial and health care powers of attorney and beneficiary designation forms) against the background of state property law, financial institution contracts and the state (and, sometimes, federal) laws concerning testamentary and non-probate distributions.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.



**MLTX G806. Orphans Court Pleading and Trial Practice. 2 to 3 Credit Hours.**

This course will cover both petition and accounting practice, and trial practice in the Pennsylvania Orphans' Courts with special attention to will contests. The students will study state and local rules and case law in areas most commonly litigated in the Orphans' Court and will: 1) draft a series of pleading practice documents, 2) learn about the various phases of a trial, and 3) practice their skills in a courtroom setting.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G807. Professional Conduct in Tax Practice. 3 Credit Hours.**

In this course, a student will take a focused look at how professional-conduct norms apply in specific contexts of tax practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G860. Employee Benefits Tax Policy. 1 to 3 Credit Hour.**

This seminar examines federal income tax policy as it relates to selected aspects of employee benefits and enables students to explore the social and economic choices that underlie the tax system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G995. Internatnl Tax Planning. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**MLTX G998. Tax Research and Writing. 1 to 4 Credit Hour.**

Tax practice, unlike subjects grounded on common law, proceeds from statute with distinct contributions from the executive and judicial branches, weaving an intricate web. Taxpayers must self-report, and most taxes are self-assessed. Tax has special professional-conduct rules and penalties. These differences affect how practitioners research, interpret, analyze, and write about tax law. This course focuses on those skills, including consideration of research resources and authorities unique to tax law, and modes for interpreting and analyzing tax authorities. While methods for good writing apply whatever is the content one seeks to explain, the course focuses on some formats and difficulties that are particular to tax practices. The work skills and methods covered are applicable to tax practice generally and specialized knowledge of any practice area is not assumed.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Law Prof, Third Year Law Prof, Fourth Year Law Prof, Law LLM.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate, Law.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of D in (JUDO 0600, MLTX 0501, MLTX G518, JUDO C600, or JUDO J600)

## LLM Trial Advocacy (MLTA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MLTA 0500. Orientation. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLTA 0501. The Art of Advocacy. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLTA 0502. Expert Witnesses. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLTA 0503. Evidence/Trial Lawyers. 1 to 3 Credit Hour.**

This course reviews evidence fundamentals, advanced evidence concepts, and the use of the Rules of Evidence as tools for both the new and the accomplished litigator. Special emphasis is placed on developing an enriched understanding of the rules and their application, as well as cutting edge topics such as evidence rules applied to young children, electronically stored information, and forensics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLTA 0504. Speechmaking. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLTA 0505. Litigation Strategy. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLTA 0506. Lecture Series. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLTA 0507. Pretrial Strategy & Discovery. 5 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLTA 0508. The Jury Trial. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Management Information Systems (MIS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MIS 5001. Information Technology Management. 1 to 3 Credit Hour.**

Organizations that strategically select, manage, and deploy digital business models prosper in the global economy. Students will use systems and business process thinking to create and analyze strategies for technology-enabled organizational and industry transformation. They will propose innovative solutions for new and existing business initiatives to leverage enterprise, consumer, and social technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5101. Business Intelligence. 3 Credit Hours.**

Data is a core building block of modern organizations; transforming data into information and knowledge enables firms to compete effectively. In this course, students learn best practices for acquiring, assessing, and analyzing data to solve business problems. Students also learn the technologies that comprise an organization's information infrastructure. Students gain hands-on experience with these concepts through case studies and exercises utilizing various hands on access to technology. Students will also gain skills in understanding the principles of transaction-oriented data, and how information is stored and retrieved from a data source, apply data mining and business intelligence techniques to solve specific business problems, communicate analysis results back to management for ongoing quality assurance and process improvement, understand and select appropriate data visualization techniques to effectively communicate results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5102. Process Improvement and Innovation. 3 Credit Hours.**

An information system is only valuable to an organization when it enables and supports a useful business process. Students learn to assess, design, and analyze processes that foster innovation. Core concepts include designing effective solutions, identifying metrics for assessment, and communicating plans to management. Students apply these skills through analysis of business problems for actual firms. Throughout the course, students will gain a deeper understanding of the role of process in the functioning of an organization and how to innovate around that process by redesigning workflows and matching requirements with organizational systems. Students will also be able to identify key stakeholders and learn the fundamentals of project management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MIS 5001, MIS 5302, or MIS 5402)

**MIS 5104. Network Centric Applica. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5105. Emerging Technologies. 3 Credit Hours.**

This seminar reviews emerging technologies that will prepare students to effectively leverage new technologies to create business opportunities through innovation. The specific topic of this course varies by semester to accommodate new trends and technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5108. Digital Business Strategy. 3 Credit Hours.**

Information Technology leadership is a critical function in organizations. This course teaches the skills of effective technology strategists. Students develop the business case for new technology initiatives, evaluate the success of existing initiatives and develop plans for technology-enabled organizational change. Through a series of case study analyses, students develop technological and organizational skills required of IT leaders.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MIS 5001, MIS 5302, or MIS 5402)

**MIS 5109. User Experience Design. 3 Credit Hours.**

Today the user experience is the whole system; it is the interface and the experiences that define success, the code and business model are often secondary. Users only bother with activities that are obvious, simple, and pleasing. Perhaps the most challenging and interesting part of digital is the user experience (UX). This course focuses on understanding, evaluating, and designing user experiences. In the context of practical projects, we will learn the human, social, organizational, business model, and technical aspects of UX design. The goals of this course include understanding the role of usability and design principles, evaluating user experiences, and building a complete user experience using innovation to achieve the UX goals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5112. Business Design and Innovation. 3 Credit Hours.**

Digital business opportunities are no longer limited to the technology itself; they also include the experiences and ecosystems around them. To succeed in this new economy, today's leaders require a broad set of skills that incorporate creative thinking and innovation. Students will learn the tools and methods of Business Design to address real-world business problems. They will apply design inquiry techniques to craft original solutions to a series of practical scenarios.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5121. Enterprise Resource Planning Systems. 3 Credit Hours.**

This course introduces students to the essential concepts of an Enterprise Resource Planning (ERP) system including business processes, security, audit, and control functions. The course looks at how a business' key transactions are executed and how business process operational risks are accounted for and controlled in an ERP environment. Information system and accounting controls to assure confidentiality, integrity and reliability are examined. Finally, the course looks at how transaction processing data is transformed into data for management analysis and financial reporting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5122. Enterprise Architecture for IT Auditors. 3 Credit Hours.**

This course teaches students about the technology concepts and components that are critical for IT auditors to understand. It uses an enterprise architecture framework to introduce students to business data, computer applications and infrastructure necessary to supporting operational business processes. The course introduces students to computer networks, operating systems, servers and applications with a focus on using the command line to audit and identify vulnerabilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5163. Sys Anal/Rapid App Dev. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5170. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MIS 5182. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MIS 5190. Special Topics in MIS. 1 to 6 Credit Hour.**

Special topics in current developments in the field of information systems are covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MIS 5201. IT Audit Process. 3 Credit Hours.**

This course introduces students to the essential concepts of IT auditing. Students will learn standards and guidelines for performing an IT audit. Topics will include concepts of internal controls. Students will learn to plan and manage an audit as well as how to report on evidence collected during the audit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5202. IT Governance. 3 Credit Hours.**

This course examines the principles of IT governance and management. Understanding IT governance and operations are an integral part of enterprise governance. Effective governance and management of IT consist of leadership, organizational structures and processes that ensure that IT operations sustain and extends the enterprise strategy and objectives. Topics includes IT frameworks, standards, policies, procedures, organizational structures, enterprise architecture, risk management, IT and cyber security management, protection of assets, maturity models, laws, regulations, IT resource management, IT service acquisition and management, quality management and IT performance management. Student will have hands-on experience in exercising IT governance and management and apply topics learned to auditing and risk assessing real organization's policy, procedures, structure and processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5203. Systems and Infrastructure Lifecycle Management 1. 3 Credit Hours.**

This course examines how an organization plans, designs, builds, implements and maintains information systems within an environment of IT risk management and control. Topics include information feasibility and business case assessment, requirements analysis, system design, project planning, IT risk management, development versus acquisition tradeoffs, maintenance support and return of investment analysis to assure technologies deliver value and support the organization's business objectives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5205. IT Service Delivery and Support. 3 Credit Hours.**

Learn how the operational aspects of an IT organization deliver on the value proposition of the organization. Learn about the technical infrastructure and how this infrastructure provides a reliable and secure platform for applications. Learn about service center management and how these teams are utilized to deliver value to the organization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MIS 5201.

**MIS 5206. Protection of Information Assets. 3 Credit Hours.**

Information is an organization's most precious asset. Inadvertent disclosure of sensitive information, loss of data integrity and availability of information can have significant operational and financial impact on the organization. In this course students learn to apply COBIT and the NIST Risk Management Framework to recognize and manage risks facing information assets of the organization through mitigating controls including logical, physical, and administrative IT security; and business continuity, disaster recovery and contingency strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5208. Data Analytics for IT Auditors. 3 Credit Hours.**

This course introduces students to the use of data in the detection and prevention of financial fraud and the detection of cybersecurity threats and attacks. This class relies heavily on data analytics to examine datasets produced by audit and security controls (for instance, network log files). Basic data analysis concepts are presented and then applied to security or audit problems. Audit-specific and more general business intelligence tools will be used to help students better understand the analytics process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5211. Ethical Hacking. 3 Credit Hours.**

This course introduces students to the hacking strategies and tactics used by ethical or "White Hat" hackers. Methods of vulnerability exploitation to be used primarily in the process of Security Penetration will be explored in theory and in hands on exercises. The course will require simple programming using Open Source scripting languages and hacking tool kits. For that reason some knowledge of and experience with computer programming is required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5212. Penetration Testing. 3 Credit Hours.**

This course introduces students to Penetration Testing. Methods of vulnerability assessment and exploitation are examined as a means of identifying areas requiring improved security and recommended changes. The ethical, business governance and legal implications of penetration testing are examined. Specific techniques are examined in detail with the intent of giving the students a practical understanding of how Penetration Tests are conducted and laboratory-based experience in their actual conduct.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5213. Intrusion Detection & Response. 3 Credit Hours.**

While all businesses work to be as secure as possible, no organization can be completely secure. Preventing attacks, quickly identifying successful attacks, detecting advanced persistent threats and monitoring systems activity in order to deter intrusions can result in significant business benefit. This course examines the variety of tools and techniques used to do this work. This course also examines the process and procedures required for an effective intrusion detection and response through preparation, monitoring, eradication, and compliance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5214. Security Architecture. 3 Credit Hours.**

Examines the methodology by which an organization aligns its business strategy with its security operations. Both the current and desired future states of the business' security efforts are described so that resources can be directed to the security efforts most needed to support the business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MIS 5206.

**MIS 5215. Operating System Security. 3 Credit Hours.**

This course introduces students to operating system security and tools to secure and audit an organization's computer operating systems. Methods of securing operating systems are explored in theory and through hands-on exercises. The first part of the course focuses on processes used to secure the Microsoft Windows operating system. The second part of the course applies similar techniques to secure the Linux operating system. The course will discuss techniques and tools used to help reduce weaknesses in default installations and configurations of different operating systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5216. Organizational Forensics. 3 Credit Hours.**

This course provides students with a broad understanding of the investigation of digital data to gather evidence relating to criminal or other legal incidents and events. The class examines how technology and law interact. Lecture and hands-on exercises enable students to gain a practical understanding of: incident response, processing a crime/incident scene and gathering evidence, performing forensics analysis and conducting forensics investigation. This course helps students understand how to respond to computer incidents. Legal issues involved in responding to computer attack are explored, including employee monitoring, working with law enforcement and handling evidence.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5217. Network Security. 3 Credit Hours.**

This course introduces students to network architectures, network security concepts, threats and the methods used to protect network communication, which determine an organization's "Security Posture". Students will perform an in-depth examination of the OSI model and TCP/IP protocol in order to understand the technologies behind protecting network communications (firewalls, routers, switches, virtual private networks, intrusion prevention and detection systems, and highly available architectures). With this fundamental understanding of network communication, students will explore the inherent vulnerabilities related to network communications and the challenges of implementing an enterprise security architecture that aligns with business goals, IT strategy, and Governance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MIS 5206.

**MIS 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in MIS 5001.

**MIS 5287. Business Skills for ITACS Professionals. 3 Credit Hours.**

In this course students practice a variety of business skills that are necessary to be effective as an IT auditor. These skills include managerial communications and public speaking skills, interviewing skills, negotiation and personal selling skills, business writing, industrial psychology/behavioral science skills, project/time management and team building skills. The course is delivered through a series of workshops and simulations and include observations of business practices at host IT companies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5411. Business Intelligence and Data Visualization. 3 Credit Hours.**

The first part of this course will focus upon the strategic role of information technology from the perspective of a non-technical manager. Key topics include IT strategy, systems thinking, disruptive innovations and digital transformation, digital business models, cybersecurity, cloud computing, IT governance and ethics. The second part of this course follows completion of an Excel module, and will explore the principles of data literacy and analysis through tools that enable turning data into insight through analysis and visualization. Students will also learn to evaluate visualizations by applying key principles of presenting data effectively.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5603. Social Media Innovation. 1.5 to 3 Credit Hour.**

In Social Media Innovation, students will review concepts and principles related to social and digital media. Through a combination of readings, discussion, presentations and projects, we examine (i) why social media is often a crucial channel for business success; (ii) how organizations are and should be using social media to achieve their goals; and (iii) the role of centralized, decentralized, and crowd-sourced information online. At the end of the course students will have gained deeper knowledge on understanding the tenants of social business governance, be able to analyze how modern marketers navigate the major platforms, explore social media listening and data management best practices, and identify approaches for successful social media campaign planning and implementation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5651. Digital Innovation in Marketing Capstone. 6 Credit Hours.**

In this fully immersive, experiential capstone, students will design and measure the efficacy of a digital marketing strategy across multiple channels, evaluate the suitability for new digital marketing technology such as mobile apps, and manage a portfolio of digital marketing assets such as mobile apps, websites, social media and others. Students will design a fully formed digital marketing campaign around their own team generated idea. Students will spend the semester applying knowledge gained in all previous coursework including building the collateral, analyzing data, developing a UX - culminating in one final presentation of their work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5687. Business Skills for ITACS Professionals I. 1.5 Credit Hour.**

In this course students develop and practice a variety of business skills that are necessary to be effective as an ITAC professional. These skills include managerial communications and public speaking skills, interviewing skills, negotiation and personal selling skills, business writing, industrial psychology/behavioral science skills, project/time management, leadership and team building skills. The course is delivered through a series of workshops and simulations that enable students to practice leadership, team building, and management communications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5688. Business Skills for ITACS Professionals II. 1.5 Credit Hour.**

In this course, you will increase the business and interpersonal skills necessary to be a competent and successful ITACS Professional. These skills build upon those covered in the previous semester as students learn how to improve their responsive listening skills, achieve intention in communication, clarify their roles as leaders in decision making contexts, build teams, improve their writing effectiveness in IT auditing and security reports and assignments, and build credibility in the ITACS professions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5801. Managing Information in the Enterprise. 3 Credit Hours.**

This course provides an introduction to the strategic role of information technology in today's digital centric world. You will learn how to apply systems thinking to analyze and understand organizational IT strategy and usage. You will also learn how to apply theories of innovation to analyze the disruptive potential of technology. Organizations that strategically select, manage, and deploy digital business models prosper in the global economy. Students will use systems and business process thinking to create and analyze strategies for technology-enabled organizational and industry transformation. They will propose innovative solutions for new and existing business initiatives to leverage enterprise, consumer, and social technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MIS 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MIS 5901. Capstone in Information Technology. 3 Credit Hours.**

Open only to M.S. in MIS students who must have completed all 4 core courses and 2 electives. For this capstone experience, students select a topic in their area of interest and write a research paper or implement an information system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5902. IT Auditing Capstone. 3 Credit Hours.**

This is the final course of the ITACS IT Auditing track. This course has two purposes. First, students are guided through an in-depth review of what they learned in prior courses of the track, with emphasis on mastering key points of the five Certified Information Systems Auditor (CISA) knowledge domains while preparing for the CISA exam. Second, students work on a project focused on integrating what they have learned through research of an emerging topic in the field of IT assurance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 5903. Cyber Security Capstone. 3 Credit Hours.**

This is the final course in the ITACS Cyber Security track. This course has two purposes. First, students are guided through an in-depth review of what they learned in prior courses of the track, with emphasis on mastering key points of the eight Certified Information Systems Security Professional (CISSP) knowledge domains while preparing for the CISSP exam. Second, students work on a project focused on integrating what they have learned through research of an emerging topic in the field of IT assurance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 9001. Qual & Interpret Meth-IS. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**MIS 9002. Inf Sys Found & Theory. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 9003. Foundations of Electronic Commerce Research. 3 Credit Hours.**

This course offers an overview of electronic commerce research in the domain of Information Systems (IS). An impressive body of work on electronic commerce has developed over the last two decades in IS research, and this course aims at reviewing and integrating this large body of research toward identifying gaps in the literature and proposing new opportunities for research that students can pursue as part of independent research projects. This course overviews the electronic commerce literature in IS research under a framework based on the main entities involved in electronic commerce - businesses and consumers that interact with the aid of Internet technologies, resulting in three broad research areas - (1) Business to Consumer (B2C), (2) Consumer to Consumer (C2C), and (3) Business to Business (B2B). These three broad research areas are further categorized into sixteen specialized topics and sub-areas, which help summarize the literature and integrate the body of work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 9004. Adv Research Methods-IS. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MIS 9011. Proseminar in Management Information Systems. 1 to 3 Credit Hour.**

This course is required for all first year PhD in Business Administration - MIS students. It offers an overview of electronic commerce research in the domain of Information Systems (IS) under a framework based on the main entities involved in electronic commerce - businesses and consumers that interact with the aid of Internet technologies, resulting in three broad research areas - (1) Business to Consumer (B2C), (2) Consumer to Consumer (C2C), and (3) Business to Business (B2B). These three broad research areas are further categorized into sixteen specialized topics and sub-areas, which help summarize the literature and integrate the body of work. An impressive body of work on electronic commerce has developed over the last two decades in IS research, and this course aims at reviewing and integrating this large body of research toward identifying gaps in the literature and proposing new opportunities for research that students can pursue as part of independent research projects.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Business Administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**MIS 9090. Contemp Topics & Res-IS. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MIS 9183. Directed Study in MIS. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

## **Management Science/Operations Management (MSOM)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MSOM 5001. Operations Management. 1 to 3 Credit Hour.**

The "operations" function is the core of any organization, where inputs such as labor and technology are converted into goods and services. The course provides a survey of several diverse operations topics that are central to both the manufacturing and service sectors of the economy, such as forecasting, inventory control, quality management, production planning, and supply chain management. The emphasis of the course is to apply quantitative models to effectively design and control these operational systems. Software is extensively used to support the operations analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001, STAT 5401, or STAT 5301)

**MSOM 5107. Lean, Six Sigma, and the Science of Improvement. 3 Credit Hours.**

This course provides an outstanding opportunity to learn the basic concepts of improvement science and offers exposure to key tools used in the science and art of improvement. The tools of quality and improvement science are explored, and the student has an opportunity to practice with the tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 5108. Project Management. 3 Credit Hours.**

This course follows a life-cycle approach to managing projects, beginning with project initiation concerns and ending with project termination. Project planning and scheduling are given the most emphasis, making use of the PERT and CPM approaches. A course project is required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 5111. Optimization Methods. 3 Credit Hours.**

This course covers optimization models, methods, and software applied to solve business problems focusing on models and methods used in computational finance, ranging from asset allocation to risk management, from option pricing to model calibration. Students gain an understanding of linear, quadratic, integer, dynamic, and stochastic programming methods and the tools for implementing these models in practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 5156. Logistics and Supply Chain Management: Tools, Strategy, and e-Business Issues. 3 Credit Hours.**

One objective of this course is to apprise students of the e-impact on supply chain management (SCM) and, conversely, on how SCM is growing more important as more organizations embrace e-business. The overarching objective, though, is that through this introduction to and survey of the field, students learn what today's issues in logistics and SCM are and how they are treated. That is, the students are expected not only to grasp what typical logistics and SCM problem areas are, but also to become familiar and competent with some of the analysis tools that managers use to address these problems. This course will be taught online.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 5170. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSOM 5175. Multi-Criteria Decision Analysis. 3 Credit Hours.**

Decision-making processes and techniques emphasize that solving problems often entail conflicting criteria. Approaches to incorporating and resolving this conflict are presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 5182. Independent Study. 1 to 6 Credit Hour.**

Special study in a particular aspect of operations research, under direct supervision of a graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSOM 5190. Special Topics - MSOM. 1 to 6 Credit Hour.**

Content varies by semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSOM 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSOM 5806. Managing Operations in the Enterprise. 3 Credit Hours.**

This course entails the study of decision-making techniques applicable to operations in both service and manufacturing enterprises. These techniques are examined as they apply to both traditional organizations and those in the dynamic world of new technology and e-business. The techniques are applied in areas such as supply chains, quality management, capacity planning, and resource allocation. Software is used to help students apply these techniques in course projects related to the workplace.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5801 or STAT 5001)

**MSOM 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSOM 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSOM 9101. Continuous and Nonlinear Optimization Methods. 3 Credit Hours.**

This course will aim to introduce the basic principles of Continuous Non-Linear Optimization and Optimal Control Theory. Some related Non-Linear Optimization and Optimal Control Theory papers (either existing paper or new idea) will be presented by students after lectures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 9102. Linear and Discrete Optimization. 3 Credit Hours.**

We will introduce linear programming and integer programming methods in this course. This course will cover how to model large-size problems using linear programming and integer programming and solve them using solvers such as CPLEX. In this course, we will also discuss various research papers with applications of linear programming and integer programming models. This class will also cover the theory and applications of combinatorial optimization. We will introduce graphical and network modeling of problems in transportation and distribution, facility location, communication, scheduling, and staff assignment. Topics include minimum cost spanning trees, the greedy algorithm and matroid theory, network flows, maximal matching, vehicle routing algorithms, computational complexity, total dual integrality, and polyhedral combinatorics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 9103. Combinatorial and Discrete Optimization. 3 Credit Hours.**

This class will cover the theory and applications of combinatorial optimization. We introduce graphical and network modeling of problems in transportation and distribution, facility location, communication, scheduling, and staff assignment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 9104. Stochastic Modeling and Optimization. 3 Credit Hours.**

This class will introduce students to the modeling of stochastic, or random, phenomena and the application of these models to problems in operations and supply chain management. Topics include Poisson processes, binomial and exponential distributions, Markov chains and their applications (in particular to queueing theory), as well as Markov renewal theory and continuous-time Markov processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 9105. Fundamentals of Supply Chain and Operations Management Theory. 3 Credit Hours.**

This is a course on quantitative models and the analysis and optimization of operations and supply chains. Mathematical models designed to support operational designs in production, inventory, service and supply chain will constitute the core of this course. Topics covered include: (1) deterministic inventory model, (2) stochastic inventory model, (3) supply chain coordination and contracting, (4) model of strategic customers, (5) queueing economics, (6) platform and two sided markets, (7) behavioral decision making, and (8) model of social interaction. The course will also pay particular attention to emerging new methodologies and emerging applications in supply chain, e-commerce, innovative marketplaces and platforms, and sharing economy. This course aims to introduce students to the analytical methods required to conduct analytical research in the above area comprehensively and precisely. It provides essential tools and skills for both future technically oriented business analysis, as well as research in supply chain management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSOM 9106. Dynamic Programming: Theory and Its Applications. 3 Credit Hours.**

In this course, students will learn how to formulate a sequential decision making problem as a dynamic program. They will learn the classical methods to solve finite-horizon and infinite-horizon dynamic optimization problems. For many dynamic optimization problems whose optimal solutions cannot be easily obtained or practically implemented, we will introduce some useful heuristic approaches, such as value function approximation and model predictive control. For cases when decision makers have incomplete knowledge of the system, students will learn some powerful joint learning and optimizing heuristics, such as upper confidence bound algorithm. We will cover several applications of dynamic programming throughout this course, such as revenue management and pricing, and inventory control. This course aims at preparing students to do research in dynamic programming and its related areas, such as reinforcement learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Marketing (MKTG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MKTG 5001. Marketing Management/Strategy. 3 Credit Hours.**

This course is designed to provide students with an understanding of how firms develop marketing strategies to create and manage the creation of meaningful offers that are valued by consumers for the purpose of developing and maintaining customer relationships. Initially, we will address the evolution of market systems at the macroeconomic level and the role that marketing plays in bridging the gap between the production and consumption sectors of the economy. Subsequently, we will explore how firms develop strategies to create customer value through product management, pricing, marketing channels, supply chain management, customer relationship management and communications directed to buyers and also develop an understanding of how buyers acquire, consume and dispose of these goods and services.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 5101. Consumer and Buyer Behavior. 3 Credit Hours.**

Use of concepts from the behavioral sciences for identifying market segments, predicting customer response to alternative marketing strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001, (MKTG 5401 and MKTG 5402), (MKTG 5301 and MKTG 5302), MKTG 5303, or MKTG 5403)

**MKTG 5103. Marketing Research: Techniques and Application. 3 Credit Hours.**

Basic approaches to planning, collecting, analyzing, and communicating information from the marketplace. Techniques and applications for specific marketing areas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001 (may be taken concurrently)

**MKTG 5104. Marketing Strategy. 3 Credit Hours.**

Marketing Strategy provides an executive viewpoint of integrated marketing concepts, including: market analysis, segmentation, targeting, and positioning, and the 4Ps (product, price, promotion, and place). Students learn to apply both strategic and tactical elements of these marketing concepts, integrate these into financial models, and make decisions in realistic environments in order to maximize long term firm value. This course emphasizes skills and experiences in analyzing a business' situation and formulating, implementing, and monitoring marketing strategy in a competitive environment. In particular, students will be able to select segments in which to compete, develop meaningful points of differentiation and positioning statements, think critically about product design, set prices in a variety of situations, deal with distribution and channel issues, and understand promotion strategies. There is a heavy emphasis on the link between marketing decisions and financial outcomes, as well as on communicating results of analysis to upper management. Note: Prior to fall 2017, the course title was "Managerial Decision Strategies in Marketing".

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5107. Product Management. 3 Credit Hours.**

This course examines the analytical, decision making, and planning concepts and tools available to market, product, and brand managers. Specific decisions to be addressed include: product policy, policy formulation, the selection of product market strategies, new product development, product-line modification, and organizational implications. Emphasis is placed on discussion of cases and relevant readings. Because of the heavy emphasis on interaction, regular and frequent participation will be expected.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5108. Data and Financial Driven Marketing. 3 Credit Hours.**

Data and Financial Driven Marketing provides students with an opportunity to analyze data and to recommend business plan implementations of product and commercialization tactics. The class provides a framework for choosing and applying a variety of data and financial analysis driven marketing techniques. The course covers basic methods for determining market level demand, forecasting and pricing models, promotions optimization allocation models, and other elements of ROI/ROMI analysis. The course utilizes CRM and other sources of marketing data base analysis to drive ROI/ROMI forecasts and then uses analyses to discriminate between strategic and tactical alternatives. This course also leverages financial analysis frameworks for customer identification/development, acquisition, satisfaction and retention and for strategy recommendations. Course concepts will be applied to a variety of marketing strategic decisions in both B-2-C and B-2-B situations, including segmentation, targeting, positioning, value proposition determination, new product development, branding, CRM/Loyalty programs and pricing strategies. Note: Prior to fall 2017, the course title was "Data-Driven Marketing."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5109. Mobile Marketing and Communications. 3 Credit Hours.**

Mobile devices are becoming the main means of communication and have expanded beyond talking, texting, emailing, video streaming/sharing and surfing the web. Mobile now serves as an intimate, transactional and social connector to consumers - making it a highly desirable communication vehicle for marketers. In this course, students develop a strong knowledge of mobile marketing and communications and apply this new knowledge in the development of a mobile marketing communications plan. Marketing and communication strategies/plans are developed with mobile devices in mind first followed by all other communication vehicles i.e. OOH, direct mail, TV, radio, social, search, print, etc.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5111. Customer Data Analytics. 3 Credit Hours.**

This course introduces students to methods for analyzing data residing in firms' customer databases. It covers methods for creating profiles of customer segments based on their profitability to the firm, estimate individual customers' lifetime values, and demonstrate how this technique has been used by different organizations. The course also reviews statistical concepts and introduces and uses specialized statistical software, which will be used to conduct a variety of marketing analyses using actual customer databases. Students will acquire skills to construct traditional RFM (recency/frequency/monetary) analyses to maximize response to marketing campaigns. Using these traditional techniques as a foundation, students develop/build more sophisticated models to predict customer response, such as predicting whether a customer will respond to a particular marketing offer (e.g. a direct marketing, mobile marketing, direct mail, etc.). In addition, students construct more advanced models (e.g. logit models, CHAID) to maximize response to marketing campaigns and to compare the effectiveness of alternative models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 5118. Marketing MS Capstone. 3 Credit Hours.**

STAM, R&I and EMM students collaborate on a real-world business challenge in the market place. Each student plays a critical role in developing a comprehensive strategic marketing plan. EMM students will own responsibility for accurate segmentation, targeting, positioning, value generation and financial feasibility for a product or product line. STAM students will assess the effectiveness of the same brand's current advertising and communication strategies while guiding EMM and R&I on research that is actionable. R&I students will guide STAM and EMM on sound research planning, survey development, execution, data analysis and identify strategic outcomes. All three disciplines will work together to finalize a commercial grade marketing strategy and plan of tactics worthy of business management approval. All students learn to apply team leadership practices while developing a strategic marketing plan and gaining hands-on experience that can help accelerate a career in their respective fields. Success in this course requires playing an active role through a field research project that facilitates knowledge, skill, and competency in developing a company's product line and robust communication strategy and plan for implementation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 5170. Special Topics in Marketing. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5180. Special Topics in Marketing. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5182. Independent Study. 1 to 6 Credit Hour.**

Supervised individual reading and research projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5190. Special Topics in Marketing. 1 to 6 Credit Hour.**

Special topics courses analyze emerging issues or specialized content that are not covered in regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5282. Independent Study. 1 to 3 Credit Hour.**

Special study is undertaken in a particular aspect of marketing, under the direct supervision of an appropriate graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (MKTG 5001 (may be taken concurrently), (MKTG 5401 (may be taken concurrently) and MKTG 5402 (may be taken concurrently)), (MKTG 5301 (may be taken concurrently) and MKTG 5302 (may be taken concurrently)), MKTG 5303 (may be taken concurrently), or MKTG 5403 (may be taken concurrently))

**MKTG 5411. Marketing Management. 3 Credit Hours.**

This course is designed to provide the student with the principles of marketing from the perspective of both buyers and sellers at both the macro (societal) and micro (firm) levels of analysis. Initially, we will address the evolution of market systems (macro level) and the role that marketing plays in bridging the gap between the production and consumption sectors of the economy. Subsequently, we will explore how firms (micro level) develop, price, promote and deliver goods and services to buyers and develop an understanding of how buyers acquire, consume and dispose of these goods and services. Everything that relates to a customer is part of the marketing domain, and the growing demands of stakeholders, news media and data analytics are changing the entire marketing landscape. The key to success for any organization (profit or non-profit) is to optimize how they create and deliver value. Marketing management extends far beyond promotion alone. Promotion is only one aspect of what marketing entails. In short, marketing is about enhancing perceived value of the organization and its products and services to increased willingness to pay vs. competitive offerings. Successful marketing management influences a company's desire and ability to enhance value generation, and thus increase perceived value.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 5602. Quantitative Methods in Marketing. 1.5 to 3 Credit Hour.**

This course will emphasize the use and practice of Marketing Metrics: the collection, analysis, and utilization of data for the development of marketing strategies. The course includes the study of data collection, warehousing technologies, marketing information systems, data mining, and customer relationship management. Particular attention is paid to interpretation of quantitative data (marketing dashboards).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 5604. Digital Marketing. 1.5 to 3 Credit Hour.**

This course covers foundational marketing strategy topics within the context of digital marketing innovation. Through the course, we'll look at market research, segmentation and targeting, value proposition development, branding strategies, product development, communications planning, pricing scenarios, and relationship management. Students will gain deeper knowledge of the what, why, and how of digital marketing including online listening and monitoring, search engine optimization, search ads, online promotions and email marketing. The identification of critical success factors and best practices are central to the course, as are methods for analyzing marketing effectiveness. The course focuses on both business-to-consumer (B2C) and business-to-business (B2B) markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 5605. Digital Innovation in Product Management and Branding. 1.5 to 3 Credit Hour.**

Brands are challenged with meeting the demands of a digital consumer. Now more than ever it's crucial for brands to adapt their current model and embrace marketing through use of data and technology. In this course you will learn how to leverage through the use of data and technology. Topics include developing a brand strategy, the content to support that strategy and how to communicate that content. In this course, students will learn the importance of digital to the overall marketing mix, build a digital brand strategy, develop content that meets the demands of targeted consumers, understand the various distribution platforms for your message and learn how to activate channels into your plans to maximize results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 5606. Digital Innovation in Mobile Marketing and Communication. 1.5 to 3 Credit Hour.**

In this course, students will develop a mobile marketing strategy for different target audiences as well as how to effectively integrate mobile marketing into an overall brand and business strategy. Students will learn how to convert that strategy into an effective campaign using the appropriate mobile tools and finally apply course knowledge to track and measure the effectiveness of digital campaigns. Through a combination of readings, discussion, presentations and projects, students will examine how mobile technologies are changing how we experience media, why a standalone mobile strategy is insufficient, how mobile tools can enhance, expand and transform existing marketing initiatives, how mobile data can help brands more effectively scale their message to new audiences and the ethical and social considerations inherent when personalizing and measuring the consumer experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.



**MKTG 5617. Advanced Modalities. 3 Credit Hours.**

This is a mandatory three-credit course in our MS degree program in Marketing Research and Analytics. The course will focus on understanding some of the emerging trends in the marketplace. The course will focus on readings and cases from Harvard Business Publishing. This course uses lectures, exercises, and cases. The lecture portion will introduce concepts, decision frameworks and stimulate discussion. The case assignments offer "real world" experience in analyzing problems and making critical decisions in uncertain environments. This course outlines how companies apply the disciplines of marketing including how social listening fits into an organizational structure, and how to properly respond to social media discussions. Uses industry-leading social media analytics platforms, such as Infegy Atlas, to develop social listening queues for analyzing how customers are talking about specific companies and their products or services. Integrates big data and machine learning and builds upon traditional modalities of data collection by delivering an in-depth understanding of the application of mobile and online techniques and tools in marketing research. Focus on creating and fielding a mobile-specific project, and understanding trends and likely future directions in mobile research. Introduction to online research communities and their most impactful use cases in the research and insights space. Using live hands-on projects focuses on the evolution from merely a faster, cheaper sample solution to a strategic platform for managing continuous conversations with hard-to-reach audiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MKTG 5001 (may be taken concurrently)

**MKTG 5618. Quantitative Pricing and Revenue Analytics. 3 Credit Hours.**

The business world is full of examples where companies create great value for their customers, but fail to capture that value in their earnings. A common reason is a failure to integrate their value-creating activities with their pricing decisions. This course provides an in-depth, cross-functional look at the role of price in a firm's value proposition to customers. This course builds upon the foundation in Business Analytics. In previous courses, we saw that data by itself is useless and that it must be transformed into information in order to have value to decision-makers. This course will extend your understanding of the art and science of extracting information from data into increasingly complex and "real world" data. Specifically, we will cover extensions to regression, logistic regression, hierarchical modeling, model selection, and other topics spanning the process of building and evaluating models. In addition, we will practice drawing intuition and insight from models and effectively communicating that insight in a format that can help decision-makers to make better decisions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MKTG 5001 (may be taken concurrently) and STAT 5001 (may be taken concurrently)

**MKTG 5680. Special Topics. 1 to 6 Credit Hour.**

Supervised individual or small group reading, research projects, or experiences based on cutting edge topics in Marketing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 5682. Independent Study. 1 to 6 Credit Hour.**

Supervised individual reading and research projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 5690. Special Topics. 1 to 6 Credit Hour.**

Supervised individual or small group reading, research projects, or experiences based on cutting edge topics in Marketing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 5801. Marketing Management in the Enterprise. 3 Credit Hours.**

Limited to students matriculated in the Executive M.B.A. program. In this course, you'll develop a firmer grasp on the strategic aspects of marketing decisions within the context of the total enterprise. You'll also analyze marketing management practices, organization and decision processes through traditional and internet-based business case studies involving product development, segmentation, pricing, promotion, distribution and implementation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 5890. Special Topics in Marketing. 1 to 6 Credit Hour.**

Special topics courses analyze emerging issues or specialized content that are not covered in regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 9001. Behavioral Science Seminar. 3 Credit Hours.**

The purpose of this seminar is to provide a solid foundation for critical thinking in the area of consumer behavior. Consumer behavior is interdisciplinary; thus, you will be exposed to theories from a variety of fields. We will discuss the key behavioral theories and focus on how one should think about developing and testing a conceptual model. Further, the course will provide an insight into how to design clever field, lab and online experiments to test your hypotheses. This course is useful for those interested in getting an insight into the key drivers of consumer behaviors, to understand major areas of psychological science as applicable to how people and/or organizations make decisions or to learn more about how to develop and test conceptual models. Specific learning outcomes are: learn about some of the major areas of psychological science as applicable to how people behave; learn how to generate research ideas (relevant for your field) based on the discussed theories; learn how to develop and test conceptual models; improve your ability to present, explain and defend your ideas (and those of others) by giving short but compelling presentations in class; get an insight into how to choose a methodology for your research; and develop your ability to professionally respond to other scholars (and critics) in a tactful but confident manner.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 9002. Seminar on Behavioral Research in Marketing. 3 Credit Hours.**

The major objective of this course is to provide broad coverage of research that has emerged from (largely) psychological approaches to consumer behavior. Among the issues discussed are how people attend to information, how such information is related to prior knowledge, how knowledge guides judgments, how people form attitudes, how people respond to persuasion, how they make decisions, and how emotions affect consumer behavior. The readings cover both classic papers in consumer behavior as well as recent, state-of-the-art research. Thus, you will have a good idea of how the field has developed over the last few decades as well as where it is headed. The emphasis of the course will be on making you strong conceptual thinkers. You will develop critical, analytical, and integrative skills necessary for the conduct of behavioral research. Therefore, it is important for each student to come to class prepared to discuss her/his thoughts about the main ideas, strengths, contributions, and shortcomings of all of the assigned articles.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 9003. Sem-Quant Research-Mktg. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 9005. Seminar in Judgment and Decision Making. 3 Credit Hours.**

This course introduces students to research in the field of Judgment and Decision Making (JDM). In addition to gaining an exposure to this interdisciplinary research area that employs concepts and tools from economics, statistics, as well as the core discipline of psychology, students will also learn to apply these concepts to business problems in management, marketing, operations, accounting, and finance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 9006. Empirical Modeling in Marketing. 3 Credit Hours.**

This is a seminar-based class designed to introduce doctoral students to advanced empirical models and estimation methods. This class addresses models and methods such as brand choice models, hidden Markov models for customer targeting, times series VARX model, marketing mix response model and optimization, machine learning for unstructured text/audio/image data, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MKTG 9011. Proseminar in Marketing. 1 to 3 Credit Hour.**

The Marketing PhD Pro-seminar provides doctoral students with an opportunity to learn about the range of academic research in marketing, and about marketing academic careers. Through critiques of academic research articles and discussions with other students and multiple faculty members, students will gain insights into research process, and the expectations of the marketing academic community. The course assignments and discussions help to build student research capability, and support student development of a research paper proposal on a topic of the student's choice.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Business Administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 9070. Special Topics in Behavioral Marketing. 3 Credit Hours.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 9080. Special Topics in Quantitative Marketing. 3 Credit Hours.**

Special topics courses are developed to cover emerging issues or specialized content and they do not repeat material presented by regular semester courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 9090. Sem-Sel Topics in Mktg. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MKTG 9183. Directed Study in Marketing. 1 to 6 Credit Hour.**

Directed Study in Marketing

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Master of Liberal Arts (MLA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MLA 5011. Introduction to Interdisciplinary Studies. 3 Credit Hours.**

This course introduces students to interdisciplinary graduate studies and to cultural analysis by looking at the kinds of questions that can best be answered through an interdisciplinary approach and with various available methodologies. Taking American culture as its primary focus, students read texts in areas such as Visual Culture, American Studies, Women's Studies, and the Arts and Society. Topics include, for example: cultural representations of gender and sexualities, and of race and "whiteness"; the social construction of space and place; technology and its construction of identity; boundaries of culture and consumption (high, low, middlebrow); museums and cultural memory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MLA 5082. Independent Study. 1 to 3 Credit Hour.**

Students who wish to enroll for Independent Study must submit a proposal written under the direction of a faculty member who will supervise the student's work. This proposal must be submitted the semester before the Independent Study is to take place. The proposal should describe the project, indicate a) works to be read, b) frequency of student-instructor meetings, c) student writing to be produced, and d) means of student evaluation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5110. Topics in the Arts and American Culture. 3 Credit Hours.**

This course explores the relationship between the arts and American culture, with an emphasis on how music, literature, and visual arts have reflected social, political, and intellectual concerns. The levels of art, from high to middlebrow to popular, will also be considered, with attention to the cross influences from one to the other, and the question of audience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5120. Topics in Cultural Studies. 3 Credit Hours.**

This course examines topics relating to popular culture, media, and advertising, with an emphasis on how cultural representations reflect social and political interests. The approach embraces various competing disciplines (e.g., literature, anthropology, philosophy) at the intersection of aesthetics and politics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5130. Topics in Visual Culture. 3 Credit Hours.**

An exploration of photography, film, television, and other visual media, in terms of the ways they interpret the world. Some of the issues considered will be: What are the elements of the visual? How are race, ethnicity, gender, and sexuality represented in the media? How do visual media interact with one another?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5140. Topics in Performance Studies. 3 Credit Hours.**

Performance Studies encompasses dance, theater, and mixed media theatrical presentations, from street theater to happenings to public ritual. The course targets specific topics ranging from historical studies to the contemporary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5150. Topics in Gender Studies. 3 Credit Hours.**

The changing constructions of gender are the subject of this course which will explore such topics as representations of masculinity; feminist theory and the academy; the sexual revolution; society and homosexuality.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5160. Topics in Environmental Studies. 3 Credit Hours.**

This course explores a wide range of environmental issues and the various factors that define those issues, encompassing physical, economic, political, demographic, and ethical considerations. Possible topics include groundwater contamination, suburban sprawl, river basin management, environmental justice, and the greening of abandoned urban spaces. It may also include an examination of the cultural meaning of the environment and its representation in art and literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5190. Topics in Modernism. 3 Credit Hours.**

Modernism was not a single movement but a multiplicity of cultural changes involving issues of perception, identity, memory, culture, and the nature of modernity itself. This course explores the terrain of culture and the arts (e.g., film, art, literature, Cubism, Expressionism, Surrealism) within the context of historical and technological change.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5210. Topics in Political Culture. 3 Credit Hours.**

Public policy has often emerged out of a combination of legal struggle, political negotiation, private wealth, and public interest groups. This course focuses on American political culture, including such topics as civil rights, the conservative right vs. the left, government by plutocracy, national health care, the rights of the poor, and the fate of the middle class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5220. Topics in Urban Studies. 3 Credit Hours.**

This course explores the way cities have been formed and continue to be formed in relation to parks and neighborhoods, suburbs, and regions. The emphasis is on the way urban culture is shaped through the design of space, architectural form, and through urban planning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5230. Topics in International Studies. 3 Credit Hours.**

After World War II, with the independence of formerly colonial nations, a new world of independent nation states evolved, torn between the pressures of ethnic culture, global communications, and international economies. This course explores issues of cultural identity and cultural conflict, as they surface in literature and film, in global tourism, in efforts at global cooperation and global competition.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 5250. Topics in Science, Technology, and Culture. 3 Credit Hours.**

The impact of science and technology on culture has been pervasive and can be measured in terms of social life and habits, the environment, the arts, and politics. Emphasizing the last hundred years, this course examines some of the more significant changes in science and technology, from the automobile to computers, and explores the ways the individual and society have been redefined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MLA 9995. Master's Project. 1 to 3 Credit Hour.**

This course is to be used for MLA qualifying paper research.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Liberal Arts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Math Education (Elementary) (MAEE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MAEE 5462. Tchg Math to Child N-6. 3 Credit Hours.**

The purpose of this course is to prepare prospective and beginning teachers to teach reform-based mathematics in early childhood and elementary school settings as suggested in the Principles and Standards for School Mathematics (NCTM, 2000). The intent of the course is to enable prospective and beginning teachers to enhance their mathematical content knowledge and develop pedagogical content knowledge and teacher efficacy. The course will also focus on equity pedagogies (i.e. culturally responsive and culturally specific pedagogies) and teaching for social justice. The course will also stress mathematical thinking and learning by observing video clips of actual classrooms and individual student assessments as well as microteaching of your peers. We explore teaching mathematics in both conceptual and procedural ways with models, manipulatives and advanced technologies to appropriate for teaching mathematics to all children, including underrepresented minority students, linguistically diverse students, and students with learning disabilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MAEE 5464. C&I in Math Educ N:6. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MAEE 5469. Spec Proj Math Ed. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MAEE 5501. Math/Sci Pedagogy Tchrs. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Math Education (Secondary) (MAES)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MAES 5469. Spec Proj Math Ed. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MAES 5471. Teaching of Mathematics. 3 Credit Hours.**

Methods and models of teaching and assessing mathematics in secondary schools. Key ideas include rigorous instruction for all students, teaching for understanding, eliciting and extending students' mathematical thinking, selecting and using high-quality classroom tasks, and developing effective classroom discourse. Focus on teaching and learning the important secondary content areas of algebra and data analysis, including mathematics modeling and the use of technology in learning these subjects. Problem solving, communication, and mathematical representations and connections are emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Mathematics (MATH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MATH 5000. Special Topics in Math. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 5001. Linear Algebra. 3 Credit Hours.**

Vector spaces and subspaces over the real and complex numbers; linear independence and bases; linear mappings; dual and quotient spaces; fields and general vector spaces; polynomials, ideals and factorization of polynomials; determinant; Jordan canonical form. Fundamentals of multilinear algebra.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5003. Professional Development Seminar. 1 Credit Hour.**

This class advances intentional Professional Development by creating an online professional profile and portfolio that allows employers to determine the strength of a student's candidacy for a specific job. Students develop an online professional profile, attend a Professional Development Workshop and write a White paper which demonstrates analytical and technical writing skills on a topic of interest to the student. The White Paper proposes a change in any STEM area where a lack of efficiency in a process, or gap in knowledge, in an area of research, exists. Finally, students organize a networking event by inviting speakers, hiring managers and graduate students in CST.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Prof Science Masters.

**College Restrictions:** Must be enrolled in one of the following Colleges: Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5005. Ethics in Computing. 2 Credit Hours.**

This course will examine the social, legal, and privacy issues applying to scientific data. Students will be given the opportunity to discuss contemporary case studies, in addition to NIH-sanctioned online training modules (Responsible Conduct in Research). The case-study based approach used in class will expose students to ethics of database management and security, open-access and open-source philosophies, the ethics of collecting, storing, and disseminating data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Prof Science Masters.

**College Restrictions:** Must be enrolled in one of the following Colleges: Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5007. Combinatorics. 3 Credit Hours.**

Basic theorems and applications of combinatorial analysis, including generating functions, difference equations, Polya's theory of counting, graph theory, matching, and block diagrams.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5011. Algebra and Functions for Teaching. 3 Credit Hours.**

This class will broaden and deepen our understanding of algebra and functions and their many applications. We will begin with an examination of the concept of function generally and then look at examples. We will consider the usefulness of functions, both in modeling real phenomena and in solving equations. We will carefully develop more advanced concepts from basic principles and logic as we proceed from polynomial functions to rational, radical, exponential, logarithmic, and trigonometric functions. As we do this, we will explore non-traditional teaching techniques and tools such as the practice of inquiry-based learning and the appropriate use of technology. We will also utilize and discuss the eight Mathematical Practice Standards set forth in the Common Core State Standards.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 1042.

**MATH 5012. Introduction to Mathematical Modeling for Teaching. 3 Credit Hours.**

In this course, mathematics will be discussed as the language of science. Many students do not have an adequate picture of mathematics: they see it either as a dry formal list of formulas or a dull study of numbers. Mathematics is in fact a network of intriguing and profound ideas that are deeply connected to reality. As a language, mathematics provides penetrating techniques of thought that allow us to analyze physical reality and to look for answers or solutions to some of the most intriguing real-life questions. Students will be asked to read the material in advance and come prepared for class discussion. The in-class activities will be conducted in an inquiry-minded fashion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 1042.

**MATH 5013. Geometry for Teaching. 3 Credit Hours.**

This class will provide a deep and complete picture of the underlying concepts needed to teach high school geometry. We'll start by learning about the basic axiomatic method, which is fundamental to all of mathematics. We'll learn about the rigid transformations (reflections, rotations, and translations) and the important role that they can play in defining congruence more generally. We'll finish by looking at some important examples of non-Euclidean geometry, where Euclid's famous parallel postulate does not hold.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 1042.

**MATH 5014. Probability Theory and Applications for Teaching. 3 Credit Hours.**

Probability is a fundamental topic with applications in nearly every aspect of life. The goal for this course is to equip the student with a large and diverse set of tools with which to tackle a wide variety of problems, both theory and application based. We will focus on the ideas behind the important topics e.g. conditioning, averages, binomial distribution, and explain their origins and applications. This will equip the student to teach their own students this material with an emphasis on the "why", which is essential to maintaining attentiveness.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 1042.

**MATH 5015. Modern Algebra for Teaching. 3 Credit Hours.**

Students will understand the integers and polynomial rings over a field as being specific examples of rings. The idea of quotient spaces will be emphasized with the particular examples of the integers modulo  $n$  and factor rings of polynomial rings illustrating and introducing the concept. Moreover, the ability to read and to construct well-written and correct mathematical proofs on these topics is an overarching goal of the course. Written communication skills will also be emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 2111.

**MATH 5016. Mathematical Analysis for Teaching. 3 Credit Hours.**

This course will start with a discussion of the basic topology of the real line and the creation of the basic tools using the completeness axiom. From there, the course will proceed to sequences and series, limits, continuity, differentiation, Riemann integration, and Taylor series representations of functions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 2043.

**MATH 5017. Number Theory and Proof for Teaching. 3 Credit Hours.**

In this course, we encounter and explore fundamental ideas in number theory. Basic properties of the integers and their two principal operations, addition and multiplication, will form the starting point of our study. Along the way, the course will introduce some basic logic and the rigorous notion of mathematical proof, including mathematical induction, in the context of number theory. Through this elementary foundation, students will experience the richness of mathematics: proof going back as far as Euclid, examples of elementary yet still unproven conjectures, and results that are easy to state and understand but require extremely complicated proofs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MATH 1042.

**MATH 5033. Introduction to Stochastic Processes. 3 Credit Hours.**

This course is typically offered in the Fall.

Markov chains, exponential distribution, Poisson process, continuous time Markov chains, Brownian motion, stationary processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5041. Concepts of Analysis I. 3 Credit Hours.**

Advanced calculus in one and several real variables. Topics include topology of metric spaces, continuity, sequences and series of numbers and functions, convergence, including uniform convergence. Ascoli and Stone-Weierstrass theorems. Integration and Fourier series. Inverse and implicit function theorems, differential forms, Stokes theorem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**MATH 5042. Concepts of Analysis II. 3 Credit Hours.**

Advanced calculus in one and several real variables. Topics include topology of metric spaces, continuity, sequences and series of numbers and functions, convergence, including uniform convergence. Ascoli and Stone-Weierstrass theorems. Integration and Fourier series. Inverse and implicit function theorems, differential forms, Stokes theorem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 5041.

**MATH 5043. Introduction to Numerical Analysis. 3 Credit Hours.**

Roots of nonlinear equations, errors, their source and propagation, linear systems, approximation and interpolation of functions, numerical integration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5044. Introduction to Numerical Analysis II. 3 Credit Hours.**

This course will cover the following topics: Analysis and numerical solutions of ordinary differential equations, Runge-Kutta, multistep, and Taylor series methods; deferred correction; convergence and stability; stiff problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5045. Ordinary Differential Equations. 3 Credit Hours.**

Existence and uniqueness theorems, continuous and smooth dependence on parameters, linear differential equations, asymptotic behavior of solutions, isolated singularities, nonlinear equations, Sturm-Liouville problems, numerical solution of ODEs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5057. Introduction to Methods in Applied Mathematics I. 3 Credit Hours.**

This is the first semester of a two-semester general overview of mathematical concepts and tools for applied mathematics. Topics to be covered include modeling and derivation of equations of continuum mechanics; solution methods for linear PDE in special domains, such as Fourier and Laplace transforms as well as Green's functions; calculus of variations and control theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5058. Introduction to Methods in Applied Mathematics II. 3 Credit Hours.**

This is the second semester of a two-semester general overview of mathematical concepts and tools for applied mathematics. Topics to be covered include dynamical systems and bifurcation theory; asymptotic analysis and perturbation theory; systems of hyperbolic conservation laws. Material is largely independent of MATH 5057.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5061. Fundamentals of Computer Programming for Scientists and Engineers. 4 Credit Hours.**

Scientists and engineers use computers for a multitude of purposes. Even with ready-to-use applications, some amount of computer programming is commonly required to adapt to changing technology while attaining the rigorous standards of each specific discipline. This course focuses on fundamental computer programming constructs, introducing the languages Python, C++ and Fortran. Through lectures and intensive exercises students will learn to implement fundamental mathematical constructs and solve basic programming problems relevant to scientific applications. The course briefly reviews also the Linux environment, its software development tools and language interoperability. For each programming language, the course focuses on constructs and syntax designed for performance and numerical accuracy, in connection with methods from applied science, mathematics and engineering. The students taking the course are expected to have sufficient mathematical maturity, as evidenced, for example, by having completed an undergraduate Calculus sequence. The majority of the grade is determined by a mid-term and a final exam, both including a combination of questionnaires and supervised programming assignments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5062. High Performance Computer Programming for Scientific Modeling. 3 Credit Hours.**

This course will provide theory and hands-on experience programming high performance computers for the solution of scientific modeling problems. This includes in particular problems arising from the discretizations of differential equations. Topics covered include domain decomposition and mesh partitioning, quantifying the computation and communication cost, communication avoidance methods, Monte Carlo methods, multithreading, benchmarking and optimization of the parallel computations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 5061.

**MATH 5063. Introduction to High-Performance Computing Technology for Scientists. 4 Credit Hours.**

This course is an introduction to the technology used in Linux clusters and supercomputers dedicated to calculations in applied science and engineering. The basic architecture of modern computers (processing units, memory, storage, operating system) is briefly reviewed, emphasizing the role and performance impact of each element in numerical computation. The core of the course focuses on setup and management of computer hardware specialized for scientific computing, and on its impact on commonly used strategies and methods for scientific computation. The material is organized in a combination of lectures and hands-on exercises, using computer hardware hosted at local facilities as well as virtualized resources. The majority of the grade is determined by a mid-term and a final exam, both including a combination of questionnaires and identification of the most efficient solution to common numerical problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 5061 (may be taken concurrently)

**MATH 5065. Topology. 3 Credit Hours.**

Topological and metric spaces. Continuity, compactness, connectedness, convergence. Introduction to algebraic and combinatorial topology. Classification of compact surfaces, fundamental groups and covering spaces.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5066. Mathematical Methods for High Performance Computing. 3 Credit Hours.**

This course presents mathematical methods for the solution of a variety of discrete and algebraic problems which are at the core of many scientific and engineering applications. The methods covered are especially tailored for high performance computing. Topics include large matrix computations, graphs and networks, fast Fourier transforms, geometric and algebraic multi-grid methods, and constrained optimization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 5061, MATH 5062, and MATH 5063.

**MATH 5067. Introduction to Abstract Algebra I. 3 Credit Hours.**

This is the first semester in a year-long abstract algebra sequence MATH 5067 - MATH 5068. It is a thorough introduction to the theory of groups and rings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 5068. Introduction to Abstract Algebra II. 3 Credit Hours.**

This is the second semester of a year-long abstract algebra course. Topics come from theory of rings, fields and modules and from Galois theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8001. Candidates Seminar. 1 to 3 Credit Hour.**

Challenging problems from many different areas of mathematics are posed and discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 8002. Candidates Seminar. 1 to 3 Credit Hour.**

Challenging problems from many different areas of mathematics are posed and discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 8003. Number Theory. 3 Credit Hours.**

This is an introduction to the ideas and techniques of number theory, elementary, analytic, and algebraic. The object of the course is to demonstrate how real and complex analysis and modern algebra can be applied to classical problems in number theory. References: H. Rademacher, "Lectures on elementary number theory"; H. Davenport, "Multiplicative number theory"; Rosen and Ireland, "A classical introduction to algebraic number theory."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8004. Number Theory. 3 Credit Hours.**

This is an introduction to the ideas and techniques of number theory, elementary, analytic, and algebraic. The object of the course is to demonstrate how real and complex analysis and modern algebra can be applied to classical problems in number theory. References: H. Rademacher, "Lectures on elementary number theory"; H. Davenport, "Multiplicative number theory"; Rosen and Ireland, "A classical introduction to algebraic number theory."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8011. Abstract Algebra I. 3 Credit Hours.**

Groups, rings, modules, fields; Galois theory; linear algebra.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8012. Abstract Algebra II. 3 Credit Hours.**

Groups, rings, modules, fields; Galois theory; linear algebra.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8011.

**MATH 8013. Numerical Linear Algebra I. 3 Credit Hours.**

The syllabus includes iterative methods, classical methods, nonnegative matrices. Semi-iterative methods. Multigrid methods. Conjugate gradient methods. Preconditioning. Domain decomposition. Direct Methods. Sparse Matrix techniques. Graph theory. Eigenvalue Problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8014. Numerical Linear Algebra II. 3 Credit Hours.**

The syllabus includes iterative methods, classical methods, nonnegative matrices. Semi-iterative methods. Multigrid methods. Conjugate gradient methods. Preconditioning. Domain decomposition. Direct Methods. Sparse Matrix techniques. Graph theory. Eigenvalue Problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8013.

**MATH 8023. Numerical Differential Equations I. 3 Credit Hours.**

Analysis and numerical solution of ordinary and partial differential equations. Elliptic, parabolic and hyperbolic systems. Constant and variable coefficients. Finite difference methods. Finite element methods. Convergence analysis. Practical applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8024. Numerical Differential Equations II. 3 Credit Hours.**

Analysis and numerical solution of ordinary and partial differential equations. Elliptic, parabolic and hyperbolic systems. Constant and variable coefficients. Finite difference methods. Finite element methods. Convergence analysis. Practical applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8023.

**MATH 8031. Probability Theory. 3 Credit Hours.**

With a rigorous approach the course covers the axioms, random variables, expectation and variance. Limit theorems are developed through characteristic functions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8032. Stochastic Processes. 3 Credit Hours.**

Random sequences and functions; linear theory; limit theorems; Markov processes; branching processes; queuing processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8031.

**MATH 8041. Real Analysis I. 3 Credit Hours.**

The syllabus coincides with the syllabus for the Ph.D. Examination in Real Analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8042. Real Analysis II. 3 Credit Hours.**

The syllabus coincides with the syllabus for the Ph.D. Examination in Real Analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8041.

**MATH 8051. Functions of a Complex Variable I. 3 Credit Hours.**

Analytic functions. Conformal mapping. Analytic continuation. Topics in univalent functions, elliptic functions, Riemann surfaces, analytic number theory. Nevanlinna theory, several complex variables.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8052. Functions of a Complex Variable II. 3 Credit Hours.**

Analytic functions. Conformal mapping. Analytic continuation. Topics in univalent functions, elliptic functions, Riemann surfaces, analytic number theory. Nevanlinna theory, several complex variables.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8051.

**MATH 8061. Differential Geometry and Topology I. 3 Credit Hours.**

Elementary theory of smooth manifolds. Singular cohomology and DeRham's theorem. Fundamental group and covering spaces. Hodge theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8062. Differential Geometry and Topology II. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8061.

**MATH 8107. Mathematical Modeling for Science, Engineering, and Industry. 3 Credit Hours.**

In this course, students work in groups on projects that arise in industry, engineering, or in other disciplines of science. In addition to being advised by the course instructors, in all projects an external partner is present. The problems are formulated in non-mathematical language, and the final results need to be formulated in a language accessible to the external partner. This means in particular that the mathematical and computational methods must be selected or created by the students themselves. Students disseminate their progress and achievements in weekly presentations, a mid-term and a final project report, and a final presentation. Group work with and without the instructors' involvement is a crucial component in this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8007 and MATH 8008.

**MATH 8141. Partial Differential Equations I. 3 Credit Hours.**

The classical theory of partial differential equations. Elliptic, parabolic, and hyperbolic operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8142. Partial Differential Equations II. 3 Credit Hours.**

The classical theory of partial differential equations. Elliptic, parabolic, and hyperbolic operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8141.

**MATH 8161. Topology. 3 Credit Hours.**

Point set topology through the Urysohn Metrization Theorem; fundamental group and covering spaces. Differential forms; the DeRham groups.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 5041.

**MATH 8200. Topics in Applied Mathematics. 3 Credit Hours.**

Variable topics, such as control theory and transform theory, will be treated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 8210. Topics in Applied Mathematics II. 3 Credit Hours.**

Variable topics, such as control theory and transform theory, will be treated.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 8700. Topics Computer Program. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 8710. Topics Computer Program. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 8981. Graduate Development Seminar. 1 Credit Hour.**

This course aims to familiarize first-year PhD students with the structure of a PhD in Mathematics. A significant focus of the course is professional development, wherein students learn about important milestones in the program and are trained in the related responsibilities. Students enrolled in this course must attend at least one seminar or colloquium per week, in order to be exposed to research-level mathematics and best practices for communicating mathematics. The seminar itself features a weekly discussion on a topic of interest, led by the Director of Graduate Studies and/or a senior TA. Topics covered in the seminar should include: Basics of departmental structure; effective study techniques for graduate courses and qualifying exams; best practices for professional conduct; creating a professional webpage; written and oral communication of research-level mathematics; research topics studied by faculty in the department; the process of finding a PhD advisor, e.g. through independent study courses; organizing PhD studies with perspective of post-PhD career goals; finding and applying for summer internships in industry and education; and applying for post-PhD employment, in and out of academia.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 8985. Teaching in Higher Education. 1 to 3 Credit Hour.**

This course is required for any student seeking Temple's Teaching in Higher Education Certificate. The course focuses on the research on learning theory and the best teaching practices, with the aim of preparing students for effective higher education teaching. All educational topics will be considered through the lens of teaching mathematics and quantitative thinking.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9000. Topics in Number Theory I. 3 Credit Hours.**

Analytic and algebraic number theory. Classical results and methods and special topics such as partition theory, asymptotic, Zeta functions, transcendence, modular functions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9003. Modular Functions. 3 Credit Hours.**

This course focuses upon the modular group and its subgroups, the corresponding fundamental region and their invariant functions. Included will be a discussion of the basic properties of modular forms and their construction by means of Eisenstein and Poincaré series and theta series. Other topics: the Hecke correspondence between modular forms and Dirichlet series with functional equations, the Petersen inner product, the Hecke's operators. Emphasis will be placed upon applications to number theory. References: M. Knopp, "Modular functions in analytic number theory"; J. Lehner, "A short course in automorphic forms"; B. Schoeneberg, "Elliptic modular forms."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9004. Modular Functions. 3 Credit Hours.**

This course focuses upon the modular group and its subgroups, the corresponding fundamental region and their invariant functions. Included will be a discussion of the basic properties of modular forms and their construction by means of Eisenstein and Poincaré series and theta series. Other topics: the Hecke correspondence between modular forms and Dirichlet series with functional equations, the Petersen inner product, the Hecke's operators. Emphasis will be placed upon applications to number theory. References: M. Knopp, "Modular functions in analytic number theory"; J. Lehner, "A short course in automorphic forms"; B. Schoeneberg, "Elliptic modular forms."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9005. Combinatorial Mathematics. 3 Credit Hours.**

Topics include: Enumeration, Trees, Graphs, Codes, Matchings, Designs, Chromatic Polynomials, Coloring, Networks.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9010. Topics in Number Theory II. 3 Credit Hours.**

Analytic and algebraic number theory. Classical results and methods and special topics such as partition theory, asymptotic, Zeta functions, transcendence, modular functions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9011. Homological Algebra. 3 Credit Hours.**

Students will learn fundamental notions of homological algebra such as chain complexes, Abelian categories, derived functors, and spectral sequences. A portion of this course is also devoted to rudiments of category theory. Students will learn how to apply constructions of homological algebra and category theory to questions from abstract algebra, topology and deformation theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8011 and MATH 8012.

**MATH 9012. Representation Theory I. 3 Credit Hours.**

This is the first semester of a two-semester course on the principal methods and results of algebraic representation theory. The course will start with an introduction to the fundamental notions, tools and general results of representation theory in the setting of associative algebras. This will be followed by a thorough coverage of the classical representation theory of finite groups over an algebraically closed field of characteristic zero. If time permits, then the semester will conclude with a brief introductory discussion of the representation theory of the general linear group.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8011 and MATH 8012.

**MATH 9013. Representation Theory II. 3 Credit Hours.**

This is the second part of a two-semester course sequence on the principal methods and results of algebraic representation theory. The main focus will be on representations of finite-dimensional Lie algebras, with particular emphasis on the case of semisimple Lie algebras. Time permitting, the course will conclude with an introduction to the representation theory of Hopf algebras.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 9012.

**MATH 9014. Commutative Algebra and Algebraic Geometry I. 3 Credit Hours.**

This is the first semester of a two-semester course on the fundamental concepts of commutative algebra and classical as well as modern algebraic geometry. Topics for the first semester include: ideals of commutative rings, modules, Noetherian and Artinian rings, Noether normalization, Hilbert's Nullstellensatz, rings of fractions, primary decomposition, discrete valuation rings and the rudiments of dimension theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8011 and MATH 8012.

**MATH 9015. Commutative Algebra and Algebraic Geometry II. 3 Credit Hours.**

This is the second semester of a two-semester course on the fundamental concepts of commutative algebra and classical as well as modern algebraic geometry. Topics for the second semester include: affine and projective varieties, morphisms of algebraic varieties, birational equivalence, and basic intersection theory. In the second semester, students will also learn about schemes, morphisms of schemes, coherent sheaves, and divisors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 9014.

**MATH 9021. Riemannian Geometry. 3 Credit Hours.**

The main goal of this one-semester course is to provide a solid introduction to the two central concepts of Riemannian Geometry, namely, geodesics and curvature and their relationship. After taking this course, students will have an intimate acquaintance with the tools and concepts that are needed for pursuing research in Riemannian Geometry or applying its ideas to other fields of mathematics such as analysis, topology, and algebraic geometry. The topics covered include Riemannian metrics, Riemannian connections, geodesics, curvature (sectional, Ricci, and scalar curvatures), the Jacobi equation, the second fundamental form, and global results such as the Gauss-Bonnet Theorem, the theorems of Hopf-Rinow and Hadamard, variations of energy, the theorems of Bonnet-Myers and of Synge-Weinstein, and the Rauch comparison theorem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8061 and MATH 8062 (may be taken concurrently)

**MATH 9023. Knot Theory and Low-Dimensional Topology I. 3 Credit Hours.**

This is the first semester of a year-long course surveying the modern theory of knots and providing an introduction to some fundamental results and techniques of low-dimensional topology. The course will start at the very beginning of knot theory; it will then proceed to several classical knot invariants (Alexander, Jones, HOMFLY polynomials). The first semester will also touch on braid groups and mapping class groups, and use these groups to show that every (closed, orientable) 3-manifold can be constructed via knots.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8061 and MATH 8062.

**MATH 9024. Knot Theory and Low-Dimensional Topology II. 3 Credit Hours.**

This is the second semester of a year-long course surveying the modern theory of knots and providing an introduction to some fundamental results and techniques of low-dimensional topology. This course will continue the development of knot invariants begun during the first semester, in particular exploring the connection between knots and braid groups. It will also use Dehn surgery techniques to extend construct quantum invariants of closed 3-dimensional manifolds. Finally, the course will survey several results in 4-dimensional topology and their connection to knot theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 9023.

**MATH 9031. Advanced Probability Theory. 3 Credit Hours.**

This course is a continuation of MATH 8031 and is based on measure theory. It covers advanced topics in probability theory: martingales, Brownian motion, Markov chains, continuous time Markov processes, ergodic theory and their applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9041. Functional Analysis I. 3 Credit Hours.**

Topics covered include Banach and Hilbert spaces, Banach-Steinhaus theorem, Hahn-Banach theorem, Stone-Weierstrass theorem, Operator theory, self-adjointness, compactness. Also covered are Sobolev spaces, embedding theorems, Schwartz distributions, Paley-Wiener theory. If time permits, Banach and C algebras will be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8041 and MATH 8042.

**MATH 9042. Functional Analysis II. 3 Credit Hours.**

Topics covered include: Banach and Hilbert spaces, Banach-Steinhaus theorem, Hahn-Banach theorem, Stone-Weierstrass theorem, Operator theory, self-adjointness, compactness. Also covered are Sobolev spaces, embedding theorems, Schwartz distributions, Paley-Wiener theory. If time permits, Banach and C algebras will be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 9041.



**MATH 9043. Calculus of Variations. 3 Credit Hours.**

First variation and Euler-Lagrange equations. Null-Lagrangians and the Caratheodory's "Royal Road". Geodesic coverings, the eikonal and the Hamilton-Jacobi equation. Second variation and Jacobi's theory of conjugate points. Strong variations and Weierstrass E-function. Hamiltonian formalism and convex duality. Hilbert's invariant integral.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9044. Harmonic Analysis. 3 Credit Hours.**

A year long course to explore the real-variable techniques developed in Harmonic Analysis to study smoothness properties of functions and the behavior of certain spaces under the action of some operators. These techniques are also essential in many applications to PDE's and several complex variables. Offered every two years.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9051. Several Complex Variables I. 3 Credit Hours.**

Holomorphic functions of several complex variables, domains of holomorphy, pseudoconvexity, analytic varieties, CR manifolds.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8051 and MATH 8052.

**MATH 9052. Several Complex Variables II. 3 Credit Hours.**

Holomorphic functions of several complex variables, domains of holomorphy, pseudoconvexity, analytic varieties, CR manifolds.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 9051.

**MATH 9053. Harmonic Analysis. 3 Credit Hours.**

A year long course to explore the real-variable techniques developed in Harmonic Analysis to study smoothness properties of functions and the behavior of certain spaces under the action of some operators. These techniques are also essential in many applications to PDE's and several complex variables. Offered every two years.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9061. Lie Groups. 3 Credit Hours.**

This course develops Lie theory from the ground up. Starting with basic definitions of Lie group-manifolds and Lie algebras, the course develops structure theory, analytic and algebraic aspects, and representation theory. Interactions with other fields, e.g., differential equations and geometry are also discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9062. Lie Groups. 3 Credit Hours.**

This course develops Lie theory from the ground up. Starting with basic definitions of Lie group-manifolds and Lie algebras, the course develops structure theory, analytic and algebraic aspects, and representation theory. Interactions with other fields, e.g., differential equations and geometry are also discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9063. Riemann Surfaces. 3 Credit Hours.**

Introduction to differential geometry, Riemannian manifolds and Hodge theory; classification of complex structures of oriented two-manifolds as conformal classes of Riemannian metrics; covering spaces and the uniformization theorem; the moduli space of the torus; the Riemann-Roch theorem for compact Riemann surfaces; interpretation of the Riemann-Roch theorem as the index of an elliptic operator.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9064. Riemann Surfaces. 3 Credit Hours.**

Moduli and Teichmueller spaces for compact Riemann surfaces; introduction to modular forms; embedding of compact Riemann surfaces in complex projective spaces. Branched coverings and maps onto the Riemann sphere.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9071. Differential Topology. 3 Credit Hours.**

Moduli and Teichmueller spaces for compact Riemann surfaces; introduction to modular forms; embedding of compact Riemann surfaces in complex projective spaces. Branched coverings and maps onto the Riemann sphere.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9072. Differential Topology. 3 Credit Hours.**

Topics and emphasis may vary depending on instructor and may include surgery, handlebodies, cobordism; topological manifolds with smooth structure, manifolds with more than one smooth structures; topology of vector bundles, characteristic classes, index theorem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MATH 9073. Geometric Group Theory. 3 Credit Hours.**

This semester-long course will survey the rapidly expanding field of geometric group theory, focusing on the role played by negative curvature. We will begin with classical combinatorial techniques used to construct and study infinite discrete groups. After introducing basic concepts in coarse geometry, we will turn our attention to Gromov's notion of hyperbolic groups. In addition to studying geometric, algebraic, and algorithmic properties of these groups, we will keep an eye towards several generalizations of hyperbolicity that have recently played a large role in understanding many geometrically significant groups. As examples, we will also touch on the study of mapping class groups, outer automorphism groups of free groups, and cubical groups.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MATH 8061 and MATH 8062.

**MATH 9082. Independent Study. 1 to 3 Credit Hour.**

Independent research supervised by a Mathematics faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9083. Independent Study. 1 to 3 Credit Hour.**

Independent research supervised by a Mathematics faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9100. Topics in Algebra. 3 Credit Hours.**

Variable topics in theory of commutative and non-commutative rings, groups, algebraic number theory, algebraic geometry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9110. Topics in Algebra. 3 Credit Hours.**

Variable topics in theory of commutative and non-commutative rings, groups, algebraic number theory, algebraic geometry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9120. Seminar in Algebra. 3 Credit Hours.**

The seminar aims to lead participating students up to the frontier of current research in algebra. The typical formats are single lectures or short series of lectures by students or the instructor on various topics in algebra, including noncommutative algebra, representation theory, group theory, operads and connections to mathematical physics. Occasionally, slightly longer mini-courses are presented in the framework of the seminar or an entire semester is devoted to a single topic of particular interest.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9200. Topics in Numerical Analysis. 3 Credit Hours.**

These courses cover some basic, as well as advanced topics in numerical analysis. The topics can be changed from time to time. The usual topics include: scientific computing, numerical methods for differential equations, computational fluid dynamics, Monte Carlo simulation, Optimization, Sparse matrices, Fast Fourier transform and applications, etc.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9210. Topics in Numerical Analysis. 3 Credit Hours.**

These courses cover some basic, as well as advanced topics in numerical analysis. The topics can be changed from time to time. The usual topics include: scientific computing, numerical methods for differential equations, computational fluid dynamics, Monte Carlo simulation, Optimization, Sparse matrices, Fast Fourier transform and applications, etc.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9300. Seminar in Probability. 3 Credit Hours.**

Research topics related to probability theory are presented in the seminar. Topics vary depending on the interests of the students and the instructor. Current topics include stochastic calculus with applications in mathematical finance, statistical mechanics, interacting particle systems, percolation, and probability models in mathematical physics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9310. Seminar in Probability. 3 Credit Hours.**

Research topics related to probability theory are presented in the seminar. Topics vary depending on the interests of the students and the instructor. Current topics include stochastic calculus with applications in mathematical finance, statistical mechanics, interacting particle systems, percolation, and probability models in mathematical physics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9400. Topics in Analysis. 3 Credit Hours.**

Variable content course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9410. Topics in Functional Analysis. 3 Credit Hours.**

This is a year-long sequence. The content varies from time to time depending on the interests of the students. Typical topics include some of the following: pseudodifferential operators, Fourier integral operators, singular integral operators, applications to partial differential equations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9420. Topics in Differential Equations II. 3 Credit Hours.**

This is a year-long sequence. Topics covered may include the theory of elliptic partial differential equations in divergence form and non-divergence form, and nonlinear PDEs. These courses may also focus on pseudodifferential operators and Fourier integral operators.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9500. Topics in Differential Geometry and Topology I. 3 Credit Hours.**

Variable topics in geometric topology and related areas. Topics include: surfaces and their diffeomorphisms, mapping class groups, braids, 3-dimensional manifolds, geometric structures on manifolds, and group actions on geometric objects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in MATH 8061 and MATH 8062.

**MATH 9510. Topics in Differential Geometry and Topology II. 3 Credit Hours.**

Variable topics in geometric topology and related areas. Topics include: surfaces and their diffeomorphisms, mapping class groups, braids, 3-dimensional manifolds, geometric structures on manifolds, and group actions on geometric objects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in MATH 8061 and MATH 8062.

**MATH 9991. Master's Research Projects. 1 to 6 Credit Hour.**

Short-term, limited research project or laboratory project in the field. This course is not the capstone project course, nor can it be used for thesis based research. The course is for master's students only, including PSM, MA or MS. This class will not confer full-time program status unless nine credits are taken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Science, Prof Science Masters.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is required for students who are preparing for the preliminary or candidacy examination. Students should enroll after coursework is completed or when preparing for the candidacy exam until the time that the preliminary or candidacy examination is completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. All students must complete a minimum of one credit of this course. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9995. Capstone Project. 1 to 6 Credit Hour.**

Capstone project for master's students including students in PSM, MA or MS. This class will provide full-time status. Students in PSM programs need to register for at least one credit of this course to fulfill program requirements. Additional credits may be required for specific programs. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Science, Prof Science Masters.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

Course for master's thesis research. Only intended for students in thesis bearing master's programs. A minimum of one credit is required. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9998. Pre-Dissertation Research / Elevation to Candidacy. 1 to 6 Credit Hour.**

This course is intended for students who are performing research prior to candidacy. Students can register for this course after required courses are completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must be registered for this course during the semester that they are to be elevated to candidacy examination. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MATH 9999. Dissertation Research. 1 to 6 Credit Hour.**

The course is for Ph.D. students who have been elevated to candidacy. During the course of their candidacy students must complete a minimum of two credits of dissertation research. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Mechanical Engineering (MEE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MEE 5110. Special Topics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 5117. Finite Element Analysis. 3 Credit Hours.**

Concepts and techniques of finite element and finite difference methods; mesh generation techniques; computer graphics presentation methods. Application to solids, liquids, and gases in the areas of stress, strain, deflection elasticity, heat transfer, fluid flow, and combustion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5172. High-Speed Imaging and Analysis for Engineering Applications. 3 Credit Hours.**

This course will introduce students to high-speed imaging and analysis techniques widely used in academia, industry, and government to solve complex engineering problems. Students will first learn key digital imaging concepts, followed by the fundamentals of optics, lensing and lighting. Then, they will learn how to process images to track and quantify the motion of points. This will naturally evolve into discussions on techniques including 3D point tracking, Digital Image Correlation (DIC), and Particle Image Velocity (PIV). Students will also be introduced to non-invasive imaging techniques for characterizing transparent flows, namely shadowgraphy and schlieren imaging. Finally, students will utilize software packages to perform digital processing steps such as filtering, pyrometry, correlations, tracking and more.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5201. Thermodynamics of Materials. 3 Credit Hours.**

An introductory master's level course that explores materials from a thermodynamic perspective: Includes the laws of thermodynamics, free energy, chemical potential, stability, etc. A detailed analysis of phase diagrams is presented in the second half of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5203. Advanced Materials Science. 3 Credit Hours.**

Chemical bonding, crystallography, defects and their effects on material properties, nucleation, growth, and microstructure development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5205. Microscopy and Microanalysis of Materials. 3 Credit Hours.**

This course will cover various Microscopy and Microanalysis techniques which are widely used in research labs and in industries to characterize micro and nano structure and chemical composition of solid matter. Among them are visual light, scanning probe and electron beam microscopy and associated spectroscopy. The primary focus will be on fundamental aspects and experimental methods of Scanning Electron Microscopy (SEM) and associated spectroscopy. The SEM facility will be used for individual student projects. Particular attention will be given to the selection criteria used for choosing the appropriate technique for materials characterization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5211. Frontiers in Mechanical Engineering. 3 Credit Hours.**

This is a survey course designed to introduce graduate students to cutting-edge research in the mechanical-engineering sciences. Topics will be taken from active research areas in the Mechanical Engineering Department, including (but not limited to) biomechanics, multifunctional materials, materials processing and/or manufacturing, acoustic sensors, nano/micro-technologies, and robotics. The course will have a coordinator, but the lectures will be given by a variety of mechanical-engineering faculty selected for their research expertise.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Engineering, Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5212. Tribology and Surface Engineering. 3 Credit Hours.**

Tribology encompasses the interdisciplinary science and engineering of interacting surfaces in relative motion. Tribology is in every aspect of our lives and has a tremendous impact on manufacturing, energy production and use, transportation vehicles, health care, mining safety and reliability, and space exploration. This course introduces the nature of engineering surfaces, methods of surface characterization, modes of friction and wear, theories of contacts, and lubrication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5312. Mechanics of Composite Materials. 3 Credit Hours.**

Introduction to the behavior of composite materials and their use in engineering structures: behavior and properties of the constituent fibers and matrices, micromechanical predictions of composite properties, anisotropic elasticity, behavior of composite laminae, classical lamination theory; fracture mechanisms, failure theories; behavior of composite plates and beams.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5314. Impact and Crashworthiness. 3 Credit Hours.**

This course is an advanced course on impact mechanics, impact biomechanics, as well as vehicle crashworthiness standards and accident data analysis. Students will learn about FMVSS and NCAP crash tests, FARS and NASS real world accident databases, and methods to analyze crash and accident data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5411. Introduction to Mobile Robotics. 3 Credit Hours.**

Introduction to Mobile Robotics will teach you, through the use of project-based learning, fundamental concepts in mapping, planning, control, and dynamics that are used in mobile robotics. By the end of this course you will be able to program both a ground and aerial robot to autonomously and safely navigate through an obstacle-filled environment. You will work with both simulated and real robots and use both off-the-shelf software and write code from scratch using ROS.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (MEE 4412 or MEE 5412)

**MEE 5412. Modern Dynamics for Robotics. 3 Credit Hours.**

This course focuses on the algebraic and differential equations governing the static and dynamic 3D motion of rigid bodies, including vectors, vector differentiation, and dyads. The equations of motion for multibody systems will be derived using Newton-Euler, Lagrange, and Kane's methods. Computational tools for 3D force and motion analysis will be used to simulate physical systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5413. Robotic Manipulation. 3 Credit Hours.**

This course is an introduction to the design, modeling and control of robot manipulators, using modern dynamic formulations for multi-degree of freedom, 3D rigid body systems. This course covers 3D spatial transformations, forward and inverse kinematics, Jacobians, joint space and operational space control, and force control. This course also introduces ROS for communication and control of 2 6 axis robotic arms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (MEE 5412 or ENGR 5334)

**MEE 5414. Optimization and Control of Mechanical Systems. 3 Credit Hours.**

This course focuses on designing optimal controllers for constrained and unconstrained dynamical systems. Topics include optimization, calculus of variations, dynamic programming, linear optimal control, trajectory optimization, optimal estimation, and model predictive control. Applications of the course concepts in classical problems as well as in modern systems will be discussed through several examples.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5423. Engineering Acoustics and Continuum-System Vibration. 3 Credit Hours.**

This graduate level course introduces the fundamentals of engineering acoustics and will help students establish a deep understanding of the physics of acoustic-wave propagation. Students will also be able to acquire knowledge on computational tools used to study acoustic systems, and explore emerging areas in acoustics including acoustic metamaterial and bio-inspired acoustic sensors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ENGR 5012 (may be taken concurrently)

**MEE 5511. Thermodynamic Properties. 3 Credit Hours.**

Review of quantum mechanics and introduction to statistical mechanics. Statistical thermodynamics and various models of matter. Accuracy and trends of the predicted properties of various materials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5512. Compressible Fluid Dynamics. 3 Credit Hours.**

This course introduces students to the subject of high speed gas dynamics. Compressible flows exhibit fundamentally different behavior from those in low speed, constant density fluids. Such flows are found in aerodynamics, combustors, turbines, jets, gas pipelines, and wind tunnel facilities. Students study phenomena associated with supersonic flows, including normal and oblique shocks, expansion fans, and compressible flows with friction and/or heat transfer. An introduction to high temperature and rarified gas dynamics is also included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5513. Aerodynamics. 3 Credit Hours.**

The forces and moments exerted by moving fluids on solid bodies are of concern in numerous applications. While the performance of flight vehicles is of particular interest, aerodynamics is also a subject of importance in passenger and race car design, wind turbines, structures, sea vessels, etc. Students will study various topics in low speed aerodynamics, including thin airfoil theory and airfoil nomenclature, finite wing theory, high lift and drag reduction devices, separated and vortical flows, and rotating blades. An introduction to transonic flows and computational aerodynamics will also be included. Students will explore Joukowski transformations, the Blasius solution, and vortex lattice methods for lift prediction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5574. Heating, Ventilation and Air Conditioning. 3 Credit Hours.**

Overview of psychrometric and air conditioning processes, preparation of the energy balance, heat losses due to transmission and ventilation, the effect of solar radiation, heat gains, load calculations and simulations, design of heating, cooling, ventilating, and air conditioning (HVAC) systems, building energy system design, simulation, and control, duct, and piping system design, room air distribution and the air diffuser performance index, ADPI, including CFD analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5575. Renewable and Alternative Energy. 3 Credit Hours.**

This survey course considers current technologies for renewable and alternative energy, including: different scenarios of producing energy; mechanical heat engines; ocean thermal energy converters; thermoelectricity; solar radiation; biomass; photovoltaic converters; wind energy; and ocean engines. The course will also consider the design of hydrogen-powered systems and of polymer electrolyte-membrane fuel cells.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5577. Power Generation and Storage Technologies. 3 Credit Hours.**

This course will give an overview of electric power generation technologies including coal, gas, and nuclear power plants, as well as some emerging technologies such as photovoltaic. This course will also discuss technologies used in power transmission and distribution such as overhead power line conductors. Power storage technologies will also be introduced including compressed air, flywheel, hydrogen, and batteries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5578. Fundamentals of Combustion. 3 Credit Hours.**

This course is focused on concepts and applications of chemically reacting systems. Topics include heat of reaction, chemical equilibrium, chemical kinetics, chemical mechanisms, coupling chemical and thermal analyses of reacting systems, laminar premixed and diffusion flames, turbulent flames and pollutant emissions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5643. Manufacturing Engineering. 3 Credit Hours.**

This course will provide an overview of existing and emerging manufacturing technologies in the modern society. Topics include state-of-the-art processing methods for metals and alloys, ceramics and powder metallurgy, polymers and composites, additive manufacturing of a wide range of solid materials, as well as micro- and nano- fabrications.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Mechanical Engineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**MEE 5731. Cardiovascular Fluid Dynamics. 3 Credit Hours.**

Mechanics of blood circulation, fluid mechanics of the heart, blood flow in arteries, unsteady flow in veins, current concepts in circulatory assist devices, biofluidics, and other selected topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5732. Tissue Biomechanics. 3 Credit Hours.**

Tissue Biomechanics course is an introductory course about the mechanical properties of living tissues. The emphasis of the course is on the meaning of constitutive models for bio-solids and bio-fluids. Topics include a review of elastic, viscous, and viscoelastic constitutive models; bioviscoelastic solids; mechanical properties of blood vessels; mechanics of skeletal and heart muscles.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 5733. Viscoelasticity. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEE 8110. Special Topics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 8315. Fracture Mechanics. 3 Credit Hours.**

This course will cover essential topics of fracture mechanics such as elastic stress intensity factor and Griffith energy balance, determination of the elastic field at a sharp crack tip via eigenfunction expansion methods, elastic-plastic crack tip fields, J integrals analysis, fatigue crack growth, and experimental determination of fracture toughness. Emphasis will be given to calculation of stress intensity factors using modern numerical methods, determination of critical crack sizes, and prediction of fatigue crack propagation rate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in ENGR 5314 and MEE 5203.

**MEE 8411. Probabilistic Robotics. 3 Credit Hours.**

This course will introduce students to various techniques for probabilistic state estimation and discuss their application to problems such as robot localization, navigation, mapping, and multi-object tracking. The course will provide students with a problem-oriented introduction to the material, and it may also cover related material from machine learning and computer vision. Students will conduct a final project on a subject of their choice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MEE 5411, ECE 5033, or CIS 5526)

**MEE 9182. Independent Study I. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by MS/MSE students and once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 9282. Independent Study II. 3 Credit Hours.**

Special study in a particular aspect of engineering under the direct supervision of a graduate faculty member. May be taken once by Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 9991. Directed Research. 1 to 6 Credit Hour.**

Under the guidance of a faculty member, the student will conduct independent research on a selected topic in engineering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have completed their coursework but who have not yet passed both the Ph.D. Preliminary Examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 9995. Project. 1 to 3 Credit Hour.**

A project assigned with the approval of the Mechanical Engineering Graduate Committee and conducted under the supervision of a graduate faculty advisor. An oral presentation in an open seminar and a written report are required to complete the independent project. Projects related to industrial applications are encouraged. For non-thesis students only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 9996. Thesis. 1 to 3 Credit Hour.**

Master's thesis. May be taken twice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

This course is intended for Ph.D. students who have passed both the Preliminary and Qualifying Examinations but who have not been elevated to candidacy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEE 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is intended only for those students who have achieved Ph.D. Candidacy status. A minimum of 6 semester hours is required for graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Media and Communication (MMC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MMC 8985. Teaching in Higher Education: Communications. 3 Credit Hours.**

A practical course in pedagogical methods. Students learn to plan course objectives, design syllabi, develop classroom techniques, establish assessment methods, and acquire polish as instructors of communications. Required course for all MM&C students. Requisite course to earn Temple's teaching in higher education certificate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9001. Communication Theory I. 3 Credit Hours.**

Introduction to the field through a review of theoretical frameworks that have served as foundations for and shaped the study of mass communication. Required course for MM&C students in their first semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Mass Media and Communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9002. Researching Communication I. 3 Credit Hours.**

Introduction to the processes of communication research, common quantitative research methodologies, and concepts of statistical literacy. Required course for MM&C students in their first semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Mass Media and Communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9003. Doctoral Colloquium. 1 Credit Hour.**

Introduction to doctoral study, the field of communication, and the MM&C program. Fall semester: Current problems and opportunities in the field, discussions and presentations of current research, and presentations by senior scholars and students. Spring semester: writing workshop. Required of MM&C students in fall and spring of their first year.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Mass Media and Communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9004. Teaching Communication. 3 Credit Hours.**

A practical course in pedagogical methods, i.e., how to teach communication. Students learn to plan course objectives, design syllabi, develop classroom techniques, establish assessment methods, and acquire polish as instructors. Required course for all MM&C students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9005. Colloquium II. 1 Credit Hour.**

Following Colloquium I, this course is designed to deepen M&C doctoral students' understanding of the field of media and communication, to facilitate their progress through the PhD program, and to prepare them for success in their post-degree career. It is designed for students in their 2nd and 3rd years in the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 2 credit.

**Pre-requisites:** Minimum grade of B- in MMC 9003.

**MMC 9087. Cultural Analytics Practicum. 0 to 1 Credit Hours.**

This course is the concluding experience for students enrolled in the Cultural Analytics graduate certificate program. The Practicum brings together all students and guides them toward completion of their final project. Because students come from multiple disciplines and their projects are varied in nature, the course instructor will assign a mentor from staff in the Digital Scholarship Center to work with the student on the technical skills required to complete their project. This includes active consultation on scoping the project, recommendations and introductory training for specific tools, and ongoing consultations to ensure the work is completed successfully by the end of the semester. In addition, all students participate in a weekly meeting with the course instructor to receive information on best practices for data management, intellectual property issues, and other topics of importance to the full group. One student will give a detailed presentation on their project each week, so they can receive feedback from the full practicum group, and so that all members of the group can learn how to successfully structure a research or creative project in cultural analytics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (CLA 5019 or HIST 5152)

**MMC 9101. Communication Theory II. 3 Credit Hours.**

Survey of the principal social sciences and humanities approaches that have led to the emergence of mass communication as a field in the modern academy. Includes review of the history of the study of the modern media as well as the perspectives guiding behavioral and social effects studies related to mass communication. Required course for MM&C students in their second semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MMC 9001 and MMC 9002)

**MMC 9102. Researching Communication II. 3 Credit Hours.**

Introduction to qualitative research approaches applicable to the study of mass communication. Includes consideration of philosophical and conceptual approaches, epistemological and ethical concerns, and practical methodologies and tools. Required course for MM&C students in their second semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Mass Media and Communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MMC 9001 and MMC 9002)

**MMC 9202. Statistics II. 3 Credit Hours.**

This course is designed to offer students a foundation in advanced statistics. This course builds directly off of MMC 9002. MMC 9002 focused on analyses of no more than four variables. A quick review of the literature will indicate that most statistical analyses undertaken by communication scientists involve the use of more than four variables simultaneously. This course will offer students a foundation in conducting analyses of this kind, with movement from data reduction procedures (e.g., PCA, EFA, CFA) to hybrid (i.e., combination of measurement and path estimates) structural equation modeling. A quick overview of meta-analysis is also provided.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9002.

**MMC 9203. Survey Design. 3 Credit Hours.**

This course is constructed to offer students an up-to-date account of major issues associated with survey research design. The class begins with a summary of core measurement issues (e.g., concept explication, open- and closed-ended items). Attention is given to sampling frames and current difficulties with generating quality probability-based samples. Focus then turns to various types of survey designs (e.g., cross-sectional, rolling cross-sectional, panel), with summaries offered of their strengths and weaknesses. Special attention is then given to web-based survey designs given their prevalence in today's research environment. The course closes with a summary of approaching survey research from a Total Survey Error (TSE) perspective.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9002 and MMC 9202.

**MMC 9204. Experimental Design. 3 Credit Hours.**

The course will offer the basics in traditional lab experimentation. A range of designs and factors will be focused on in the opening weeks. In addition, the course will cover such advanced topics as nested models and split-plot designs. In addition, the latter portion of the course will focus on field experimentation, a technique growing in popularity in the social and behavioral sciences given its ability to maximize internal and external validity. Finally, students will wrestle with and debate the relative strengths and weaknesses in traditional lab and field experimentation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9002 and MMC 9202.

**MMC 9205. Content Analysis. 3 Credit Hours.**

This seminar-style course explores various approaches to analyzing the content and potential effects of documented communications--written materials (such as news articles, print ads, or transcripts of conversations), audio/visual forms (such as movies, TV programs, commercials, photographs, or videos of nonverbal behaviors), and interactive media (such as gaming and online applications). Content analysis is a systematic way of analyzing message content. In addition to "human coding" of topics such as TV violence, this course introduces you to a number of software options for computer text analysis, an evolving set of techniques for analyzing the written word in an era of unprecedented digital retrieval capability. The course's emphasis is on the design and execution of actual content analysis studies--methods of producing meaningful data to answer critical questions about all types of messages.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9001.

**MMC 9206. Digital Qualitative Research Methods. 3 Credit Hours.**

This course is designed to introduce students to the specific theoretical, methodological, ethical, and technical aspects of conducting qualitative research both on and in digital realms. It will draw on humanistic and social science approaches to studying the internet broadly, virtual worlds, social media, digital media and cultures, digital distribution technologies, etc. We will consider the challenges posed by digital technologies to traditional forms of textual analysis, ethnography, interviewing, and historical analysis. The course will cover studies of digital texts/objects, audiences, and producers, as well as consider how new technologies blur these traditional media and communication boundaries. In addition, we will look at how digital tools can aid analysis of qualitative data and offer new forms of research dissemination and publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9102.

**MMC 9207. Critical Textual Analysis. 3 Credit Hours.**

The text is a foundational object in the study of media: it is what we consume as audiences, what our educations and professional routines are organized around producing, and the artifacts that carry the various meanings of culture that persist over time. The purpose of this course is to introduce you to the various methodological approaches that take texts as their central point of inquiry, and to develop your skill and expertise in deploying these methods, with the goal of producing your own conference-ready piece of research by the end of the semester. Textual approaches to the analysis of media have developed in diverse fields such as anthropology, history, literature, rhetoric and philosophy; mass communication has been one place of their intellectual convergence. Therefore, readings in this class will span Modernist through Post-Modernist movements focusing, not on progress from one approach to another, but on the spiral interplay of those movements, intellectual frameworks, and their uptakes in various disciplines. There is a deep convergence of theory and method here, and as such, a robust interest theory is needed in order to guide the interpretation of media texts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9208. Historical Methods for Media and Communication Research. 3 Credit Hours.**

This is a graduate class in which students learn about and analyze the methods with which scholars investigate the media past. We will survey how researchers have approached a range of types of public communication, including but not only journalism, advertising, persuasive communication, photography, broadcasting, etc. Whenever possible, we will examine actual historical media artifacts, so that we can get a more tangible and audiovisual sense of what researchers encounter. We also will discuss how digitization of historical artifacts has transformed the nature and possibilities of historical research. We will pay special attention to both the digital and the material artifacts held in Temple University's Urban Archives. During most weeks, we'll be reading original works of media-history research, and our goal will be to assess what those scholars have done methodologically. This scholarship will include studies of historical media content, oral-history research done with media producers and audiences, and analyses of industry data and business records. We'll also explore logistical and ethical issues of the preservation, accessibility, and uses of historical evidence. Finally, we'll consider how media themselves are increasingly sources of public knowledge about history. This learning process will lead to the final assignment: a work of original historical research on a topic relevant to each student's individual interests.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9102.

**MMC 9209. Media Ethnography. 3 Credit Hours.**

This advanced topic course is designed to help students deepen their knowledge of the purpose, politics and practices of ethnography for the study of media and communication. Focusing on key methodological, epistemological and ethical questions, the course digs deep into how ethnography can be employed in different ways to study media institutions, on-line interpretive communities, and media reception and use in various cultural settings. While touching on the multiple and diverse influences in the theoretical development of ethnography, this course is organized primarily around the practical challenges and dilemmas of "doing" media ethnography, such as initiating a study, establishing ethnographic authority, the politics of representation, conducting fieldwork, observation versus participant observation, the practice of taking fieldnotes, the writing of media ethnographies, the difference between "thin" and "thick" description, and "traditional" versus "virtual" ethnographic inquiry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9102.

**MMC 9503. Advanced Quantitative Methods. 3 Credit Hours.**

Study of parametric and non-parametric statistics and electronic data processing in the context of mass communication research problems, with an emphasis on multivariate analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9002.

**MMC 9505. Psychological Proc/Media. 3 Credit Hours.**

Research and theory concerning the contemporary psychological significance of media. Topics include attention, memory, comprehension, emotional response, arousal, picture perception, unconscious processing, and person perception as they relate to traditional (radio, TV, print, film) and emerging (virtual reality, teleconferencing) media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9525. Communications Institutions. 3 Credit Hours.**

Examination of the structure and function of the media in today's global society, including consideration of patterns of corporate ownership and control, political economy of media, democratic theory, globalization, governmental regulation of media, new technologies, and the nature of various media industries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9605. Visual Communication. 3 Credit Hours.**

Critical examination of the ways photographs inform our everyday lives, focusing on photography's relationship with "truth" and "reality." Consideration of the uses of photographs for informative, interpretive and persuasive communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9612. Critical Analysis of Mass Media. 3 Credit Hours.**

Examination and application of sociological, anthropological, literary studies, historical and cultural studies approaches to the analysis of media. The course surveys the major theoretical perspectives and explores content themes that have shaped contemporary media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9625. Sem/Communication Abroad. 3 Credit Hours.**

Participation in one of Temple University's study abroad programs, including Temple/London, Temple/Japan, etc.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9647. Political Communication. 3 Credit Hours.**

Introduction to how communication scholars study politics and the media. The course considers prevalent political communication theories and trends, the relationship between political institutions and the press in the US and in other countries, elections, debates, political campaigning and advertising, new media and politics, political socialization, education, politics and popular culture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9700. Advanced Topic/MMC I. 3 Credit Hours.**

Consideration of advanced and timely topics in Mass Media and Communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MMC 9707. Social Influence. 3 Credit Hours.**

This course is concerned with understanding social influence, including the determinants of and models of attitude, belief, and behavior change, and norms, social networks, and interpersonal strategies. Students will become familiar with some current theoretical and empirical studies of social influence, including problems of measurement and research design, as well as some models of attitude and influence. Students should become aware of the tactics of social influence, their theoretical basis, and their effectiveness when that information is available. Current research being done by the instructor will be presented as relevant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9709. Media Globalization. 3 Credit Hours.**

This course examines the role of the media in the economic, political and cultural transformations that have come to be known as globalization. We will review and examine key concepts central to the understanding of globalization and explore the relationship between these concepts and the media. We will also discuss the historical and cultural debates that have shaped the development of global media studies and the theories that have emerged from these debates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MMC 9101.

**MMC 9725. Media, Identity and Representation. 3 Credit Hours.**

This course examines the relationship between representation and the production of meaning as it relates to identity, both individual and community identity. This is achieved through analyzing of a diverse range of contemporary socio-cultural themes, sites and texts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9735. Emerging Media and Communication. 3 Credit Hours.**

Examination of theory and research related to emerging media and technology. This course will examine theories related to the design and affordances of new media technologies, new forms of communication that are made possible by these technologies, and ways of understanding the economic, social, cultural, and political dimensions of new media technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9744. Public Information Campaign. 3 Credit Hours.**

Exploration of techniques and issues used in information campaigns regarding health, energy conservation, environmental protection, and other topics, and the effects of campaigns on public knowledge and behavior. Students conduct an actual campaign on campus.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9748. Media and Social Memory. 3 Credit Hours.**

Examination of the role of mass media in the creation and revision of collective (or "social") memory and the role of collective memory in the creation and revision of mass media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9749. Social Media Analytics. 3 Credit Hours.**

The seminar offers an introduction to theoretical and methodological procedures for social scientific research that relies on social media and online content as primary data. Students will learn how to conceptualize a social scientific research project that uses online media as a main source of data about human behaviors, attitudes, and communication processes. Students will also learn how to use specific tools (R, NodeXL, scrapers, QDA Miner, etc.) to download content from social media (Twitter, Facebook, Instagram, etc.), organize it as datasets, and analyze it using simple statistical, text mining, and qualitative techniques. A brief introduction to downloading data from secondary data sources will also be provided. Student proficiency in basic statistical analysis and a higher level of computer literacy are expected. The main goal of the graduate seminar is to help budding social scientists step over their disciplinary boundaries when collecting and analyzing data generated by social media. At the same time, the seminar learning activities will ensure that procedures and methods reflect sound and theoretically grounded research practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9882. Directed Projects/Comm. 1 to 8 Credit Hour.**

Tutorial course supervised by a specific MM&C faculty member. Obtain required form from SCAT Graduate Office (344 Annenberg Hall).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MMC 9883. Directed Readings/Comm. 1 to 4 Credit Hour.**

Tutorial course supervised by a specific MM&C faculty member. Obtain required form from SCAT Graduate Office (344 Annenberg Hall).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MMC 9946. Theory and Research Seminar (STARSS). 1 Credit Hour.**

Students attend the SCT Theory and Research Seminar Series (STARSS) and write a short paper. May be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MMC 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Students prepare to take preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MMC 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Students write their dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MMC 9999. Dissertation Research. 1 to 6 Credit Hour.**

Open only to Ph.D. candidates in MM&C. Students may register only after a dissertation proposal is officially approved. At least one credit must be taken each semester until the dissertation is successfully defended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.



## Media Studies and Production (MSP)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **MSP 5011. Introduction to Communication Concepts. 3 Credit Hours.**

This class reviews various theoretical frameworks that have served as foundations for and have shaped the study of human communicative behavior in the form of mediated communication. It will sort out pivotal traditions of study, topics of debate, and conceptual problems in media studies, concentrating on theory development in the United States and Europe. Whether you are interested in pursuing a Ph.D. or in developing skills as a media practitioner, this course provides the necessary background to acquiring a deep understanding of the nature and practices of mediated communication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **MSP 5021. Media Institutions. 3 Credit Hours.**

History and societal role of the mass media with an emphasis on the internal structure and workings of the mass media industries and their interaction with government and the public.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

### **MSP 5041. Communication Content and Behavior. 3 Credit Hours.**

Study of parametric and nonparametric statistics and electronic data processing in the context of mass communication research problems, with an emphasis on multivariate analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

### **MSP 5042. Media Technology and Culture. 3 Credit Hours.**

This course examines the relationships between technological developments and artifacts and cultural transformations. With a grounding in critical texts addressing the complex interplay between culture and media technologies, the course investigates the significance of both in social power, human agency, consciousness, identity, socio-political realities, public policy, knowledge, and the environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MSP 5011 (may be taken concurrently) and MSP 5114 (may be taken concurrently)

### **MSP 5110. Introductory Topics in Media Studies & Production. 1 to 4 Credit Hour.**

Specific topic varies each semester. Please view course subtitle or consult with instructor for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

### **MSP 5114. Communication Research Methods. 3 Credit Hours.**

The underlying philosophy and survey of research methods as tailored to media issues. Topics include market research, rating systems, polling, surveys, depth interviews, content analysis, focus groups, ethnography, and field and laboratory experiments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **MSP 5246. Social History Mass Comm. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 5310. Introductory Topics in Media Studies & Production. 1 to 4 Credit Hour.**

Specific topic varies each semester. Please view course subtitle or consult with instructor for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 5547. MA Project Workshop. 3 Credit Hours.**

This workshop-style course gives students the preproduction and previsualization tools needed to design and produce a well-crafted, well-researched media production for their Media Studies and Production Master of Arts final graduate project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in MSP 5011 (may be taken concurrently) and MSP 5114 (may be taken concurrently)

**MSP 5551. New Media Literacies. 3 Credit Hours.**

Examines intersection of education and participatory culture, literacy and technology change, the knowledge gap, informal learning and knowledge communities, emerging social skills and cultural competencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 5655. Communication in Media Organizations. 3 Credit Hours.**

Whether managing the department of a television station or network, a broadband content site, a radio station or other media company, understanding how to work and lead within media organizations means understanding how to be an effective communicator for this unique field. This course is designed to blend the scholarship and foundational research on communication to explore communication skills within today's media organizations. It focuses on communication from leader to worker(s), from worker to leader(s), from peer to peer, within teams, inside the structures and outside. It also covers differences in communication styles and their effectiveness in large organizations, moderate and small businesses, team settings, cyber teams and when working independently. Topics include conflict resolution, managing cross-cultural workplaces, the impact of technology, online communication, emotions in the workplace, and current global trends. As an online class, work will consist of independent readings, weekly postings to a course online discussion board, online live chats, writing video commentaries, content review exams and a final project on a related topic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

**MSP 5663. Art and Business of Recording. 3 Credit Hours.**

An examination of the creative, business, and legal issues involved in the process of a music recording project from the perspective of the Record Producer. Students develop skills related to the understanding of music industry contracts, project budgeting and financing, copyright and publishing. Significant time is also spent analyzing current industry trends, developing leadership skills, and individual growth of a unique production style within an historical perspective.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 5701. Producing and Directing. 4 Credit Hours.**

The theory and practice of television producing and directing techniques. Students will pitch original project ideas and work in small groups as a production company, focusing on longform works of TV/video production and will produce a quality television program from inception to completion. Students will also engage in writing for TV, casting, and editing in order to develop a professional and creative portfolio piece.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 5702. MA Documentary Production and Studies. 3 or 4 Credit Hours.**

This course is designed to help students create informative, engaging, thoroughly researched short documentary video from inception through creation. Students will gain experience as producers, directors, and editors of nonfiction audio/visual media. To provide practical and authentic experiences, most classes will mix topical class discussions with screenings, hands-on practice in areas of idea generation, research tools, production basics, editorial logic, interview design, production management, legal and fiscal responsibility, rights, clearance, fair use, funding, and distribution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 5788. Television Production Workshop. 8 Credit Hours.**

Development of weekly half hour television programs exploring Philadelphia. Focuses on meeting professional standards in content, form, and technical quality. Summer only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 5887. Graduate Radio Practicum. 1 to 4 Credit Hour.**

Students design and produce radio announcing and talk show projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 8010. Intermediate Topics in Media Studies and Production. 3 Credit Hours.**

Topic varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 8110. Intermediate Topics in Media Studies and Production. 4 Credit Hours.**

Topics vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 8221. History of Electronic Media. 3 Credit Hours.**

Examination of the social, political, and technological history of electrical communications in the U.S., from forerunners of the telegraph through the modern telephone and integrated services of digital and broadband networks.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MSP 5021.

**MSP 8252. Law and Ethics of Digital Media. 3 Credit Hours.**

Discussion of the legal and ethical issues facing the media in an online environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 8254. Public Information Media Campaigns. 3 Credit Hours.**

An examination of the use of theory and research in the design, implementation and evaluation of public information campaigns conducted via mass and other media. Students learn about key theories and research techniques regarding campaigns to affect knowledge, attitudes and behaviors on issues related to the individual and social good such as smoking, drug abuse, safe sex, recycling, animal welfare, disaster relief and many others. They then apply this knowledge by creating, conducting and evaluating a complete campaign conducted on campus.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

**MSP 8275. #ourmedia: Community, Activist, Citizens' and Radical Media. 3 Credit Hours.**

All over the world, people are taking media technologies out of the hands of corporations and using them in their own unique ways: neighbors in Germantown, Philadelphia run their own radio station; the Maori of New Zealand write, direct, and produce films and TV series that reflect their realities and dreams; young women and men in Egypt and Tunisia use social media to mobilize against authoritarian regimes; and indigenous people in rural Mexico developed their own cell phone network. This course will take you on a journey around the world, exploring indigenous media in Mexico, New Zealand and Canada; radical media in Egypt and Tunisia; citizens' media in Colombia, Chile, Brazil, and Argentina; and immigrant media in Europe and the U.S. We will consider what it means for communities to create new narratives about and for themselves, outside of dominant corporate media structures. Along the way, the course will introduce issues of production, funding, regulation, technology, and design relevant to community/alternative/citizens' media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MSP 5011 and MSP 5014.

**MSP 8441. Media and Children. 3 Credit Hours.**

Influence of the media on children's development. Includes problems of studying socialization effects, media usage patterns, functions of the media, effects on family interaction, social class and race, political socialization, sexual behavior, consumer behavior, music, and aggression.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

**MSP 8446. Psychological Processing of Media. 3 Credit Hours.**

Research and theory concerning the contemporary psychological significance of media. Topics include attention, memory, comprehension, emotional response, arousal, picture perception, unconscious processing, and person perception as they relate to traditional (radio, TV, print, film) and emerging (virtual reality, teleconferencing) media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

**MSP 8457. Political Communication. 4 Credit Hours.**

Covers political communication theories, modes, means and institutions and serves as an introduction to how communication scholars study politics and the media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

**MSP 8471. Global Media. 3 Credit Hours.**

Study of the economic policy and technology of the emerging global communication system. Specific issues include transborder data flow, international organizations, and issues of cultural and national sovereignty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MSP 5021.

**MSP 8473. Information Society. 3 Credit Hours.**

Covers origins of the information society, information as a commodity, micro and macro economics of information, globalization, identity and community online, privacy, security, intellectual property and new media, democracy online, and how to think about the future.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MSP 5011 and MSP 5114)

**MSP 8614. Creating a Media Business. 4 Credit Hours.**

Principles of building one's own media business. Planning for a profit or non-profit media organization including market assessment, financing, and contracting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 8641. Broadcast and Cable Management. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 8657. Current Issues in Media Management. 3 Credit Hours.**

Marketing strategies for networks, stations, and cable systems. Topics included relationships with government, networks, employee groups, and ownership; personnel policies and supervision, budgets and reports.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MSP 5655.

**MSP 8741. Emergent Media Production. 3 Credit Hours.**

A hands-on production studio/theory course in which students use new and emerging software and technologies to create web-based and mobile productions. Course involves lecture, discussion, demos, weekly blogs and project critiques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 8985. Teach in Higher Ed: Comm. 3 Credit Hours.**

Teaching in Higher Education: Communications. This course focuses on learning theory and the best teaching practices, with the aim of preparing students for effective higher education teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 9333. Master Colloq/Comp Exam. 2 Credit Hours.**

Comprehensive examination colloquium required for all MA students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 9787. Television Practicum. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 9841. Seminar in Comm. 6 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 9845. Masters Colloquium. 1 Credit Hour.**

Current problems and opportunities in the field, discussions and presentations of current research, and lectures by senior scholars.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MSP 9983. Directed Readings in Communication. 1 to 4 Credit Hour.**

Tutorial course supervised by a specific MSP faculty member. Obtain required form from SMC Graduate Office in 344 Annenberg Hall.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 9985. Internship. 1 to 4 Credit Hour.**

Open only to MSP MA students with at least 20 semester hours completed. Students work as unpaid interns at compatible media industries and organizations. Enrollment limited to availability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 9991. Directed Projects in Communication. 1 to 4 Credit Hour.**

Tutorial course supervised by a specific MSP faculty member. Obtain required form from SMC Graduate Office in 344 Annenberg Hall.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MSP 9996. MA Thesis/Project. 1 to 8 Credit Hour.**

MA Thesis/Project. No more than six credits may be counted toward the degree. See MSP Policies and Procedures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Middle Grades & Secondary Education (MGSE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MGSE 5146. Teaching Science, Technology, Engineering and Math Through Project Based Instruction. 3 Credit Hours.**

Project-Based Instruction (PBI) engages learners in exploring authentic, important, and meaningful questions of real concern to students. Through a dynamic process of investigation and collaboration and using the same processes and technologies that scientists, mathematicians, and engineers use, students work in teams to formulate questions, make predictions, design investigations, collect and analyze data, make products and share ideas. Students learn fundamental science and mathematical concepts and principles that they apply to their daily lives. PBI promotes equitable and diverse participation and engages students in learning. PBI is very well suited to align with inquiry-oriented teaching and learning as recommended in education policy documents such as the National Science Education Standards, Next Generation Science Standards, and the Principles and Standards for School Mathematics. PBI is also consistent with social constructivist learning theory and with learning sciences research about how people learn. The PBI course supports your continued development as a teacher, building on your previous courses. PBI provides opportunities for you to observe and teach in the secondary science or mathematics classroom, continuing your field experiences from the prior science and mathematics methods courses. PBI also seeks to build on the theoretical knowledge base you acquired in Child and Adolescent Development. This course will also provide opportunities for you to generate artifacts for a professional portfolio to meet requirements for certification. This course aims to help close the research-practice gap by developing your capacity to identify and evaluate best teaching practices as presented in research literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5196. Reading and Writing in the Middle Grades. 3 Credit Hours.**

The purpose of this course is to prepare pre-service teachers to teach reading and writing in the upper elementary and middle level settings. Students will be introduced to theories and current views of practice in the literacy field. The areas of language, listening, reading and writing are presented throughout this course as interrelated and integrated literacy processes. Emphasis will be on providing pre-service teachers with the competencies to implement strategic instructional practices and engage in ongoing assessment for a diverse middle grades population. We will also identify ways to build classroom communities through literacy practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5296. Citizenship, Cultures, and Social Studies Education. 3 Credit Hours.**

This course examines ways to teach about diversity and dialogue in the practice of democracy. Using the social studies content areas and research in social justice, special attention is paid to the areas of multicultural and citizenship education as well as other compelling topics that influence the public or common good in a diverse society such as race relations, gender socialization, language differences, immigration, religious freedom, equality of economic and social opportunities, and global interdependence.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5404. Teaching Math in the Middle Grades. 3 Credit Hours.**

This course will focus on numbers, operations, and algebra, as appropriate for the middle grades. Special attention will be paid to understanding the conceptual difficulties students have in moving from whole numbers to rational numbers, additive thinking to multiplicative thinking, and arithmetic to algebra. Problem-solving, connections, and concrete models are emphasized. The particular content knowledge needed for teaching will be integrated in this course with general and content-specific pedagogies. Issues of planning, instruction, and assessment will be discussed. Field experiences in the form of small group instruction will support these discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5405. Teaching Science in the Middle Grades. 3 Credit Hours.**

This three-credit graduate course will draw on current methods (e.g., scientific inquiry and collaborative activities) to explore effective teaching and learning of science in the middle grades classroom. It is very important that children and adolescents develop scientific habits of mind. As a result, this course will be based on developing these habits of mind while giving students an understanding of the "Big Ideas" in science. This course will examine these big ideas in science as a whole, focusing heavily on scientific inquiry both as a pedagogical approach and a learning goal. Throughout the course, investigating the preconceptions that children and adolescents bring to the science classroom will be emphasized, as well as discovering the pedagogical approaches to uncovering and addressing them. Students will apply, evaluate, and reflect upon science teaching methods through class activities and field experience assignments that address the interdisciplinary nature of science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5427. Curriculum and Methods of Foreign Language Education. 3 Credit Hours.**

This course is focused on methods of teaching foreign languages to young learners. The course is also focused on the American Council of Foreign Language Teachers (ACTFL) proficiency guidelines and content standards. There will be a theoretical component to the course, investigating issues related to child and adolescent language learning, and how it differs from post-adolescent language learning. There will also be a very practical component to the course, in which students will have numerous opportunities to apply their learning by creating foreign language lesson units, lesson plans, and assessments for in K-8 grade language learners. There will also be a very strong assessment component to the course, focusing on how teachers can integrate authentic, formative assessments to help guide instructional planning. The overall goals of the course are to deepen students' understanding of how foreign language instruction affects child and adolescent language learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5428. Innovations in Foreign Language Education. 3 Credit Hours.**

This course seeks to allow foreign language teachers in training to examine methods and techniques of teaching language for communicative competence, and acquire practical knowledge of teaching. Featured are lesson and unit planning, teaching tasks, teaching strategies, materials development, teaching observations, and assessment based upon standards and learner performance guidelines. The course is also focused on the American Council of Foreign Language Teachers proficiency guidelines and Pennsylvania Department of Education World Languages content standards. The Intermediate Performance Assessment is also a focus of the course, and thus the 6 Temple University Teacher Education Program Performance Standards will be examined and applied extensively to foreign language teaching. Finally, a review of second language acquisition in relation to FL pedagogy is given. The goal of the course is to allow students to apply their pedagogical and content knowledge to a middle or high school foreign language teaching context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5465. Methods and Materials in Secondary Social Studies. 3 Credit Hours.**

The purpose of this course is to develop an understanding of teaching the four major content areas of the social studies (history, geography, economics, and civics and government). The goal is to help prepare candidates to teach these areas in terms of designing curriculum and assessment; adapting strategies from the field; and considering innovative ways to teach by drawing on available resources. The course will cover the important theories of social education and the developmental course of learning history, economics, civics, geography, psychology, sociology, and anthropology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5466. Teaching for Understanding in Secondary Social Studies. 3 Credit Hours.**

This course focuses on applied social studies methods; the course objectives are (1) that pre-service social studies teachers will learn about the rich resources found at museums, archives, and historic sites and (2) that they will have an opportunity to apply what they have learned in the program to developing curricular materials. There is a required field experience for which students are placed at Philadelphia area cultural institutions. Students will be developing collections and curriculum materials for schools and teachers in general and for National History Day. Class time will be devoted to strengthening and supporting the field experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EDUC 5402.

**MGSE 5641. Teaching Written Composition in the Secondary School. 3 Credit Hours.**

An examination of the knowledge that writers employ when they compose different kinds of texts, of the instructional contexts that are most effective in helping secondary students develop that knowledge, of the extent to which different student populations require different approaches, and of the research and theory that informs effective practice. NOTE: As part of the course, students spend 2-3 hours each week assisting in a language arts classroom. Clearances are required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5642. Teaching Literature and Reading in the Secondary School. 3 Credit Hours.**

An investigation of the research and theory that informs what texts ought to be taught in secondary schools, how to teach them most effectively, and the extent to which different student populations require different approaches. NOTE: As part of the course, students spend 2-3 hours each week assisting in a language arts classroom. Clearances are required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MGSE 5796. Literacy and Differentiation in the Academic Areas, 7-12. 3 Credit Hours.**

This course examines ways in which secondary teachers can support students' engagement with reading and writing in the disciplines, including Mathematics, History & Social Studies, the Sciences, Foreign Language, English, and Career and Technical Education. How can we teach all students the concepts, facts, and skills that they need to do well in our discipline? What kinds of reading and writing issues can inhibit students' progress? How do we identify the kinds of difficulties that different text organizations may pose for students? How can we address these issues without taking time away from teaching our discipline? What kinds of reading and writing tasks can we use as resources for helping students to learn in our discipline? How do current state and national emphases on standards and teacher accountability affect our responsibilities in the classroom?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Middle Grades Education (MGRE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.



**MGRE 5101. Citizenship, Cultures, and Social Studies Education. 3 Credit Hours.**

This course examines ways to teach about diversity and dialogue in the practice of democracy. Using the social studies content areas and research in social justice, special attention is paid to the areas of multicultural and citizenship education as well as other compelling topics that influence the public or common good in a diverse society such as race relations, gender socialization, language differences, immigration, religious freedom, equality of economic and social opportunities, and global interdependence.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGRE 5102. Reading and Writing in the Middle Grades. 2 to 3 Credit Hours.**

The purpose of this course is to prepare pre-service teachers to teach reading and writing in the upper elementary and middle level settings. Students will be introduced to theories and current views of practice in the literacy field. The areas of language, listening, reading and writing are presented throughout this course as interrelated and integrated literacy processes. Emphasis will be on providing pre-service teachers with the competencies to implement strategic instructional practices and engage in ongoing assessment for a diverse middle grades population. We will also identify ways to build classroom communities through literacy practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGRE 5404. Teaching Math in the Middle Grades. 3 Credit Hours.**

This course will focus on numbers, operations, and algebra, as appropriate for the middle grades. Special attention will be paid to understanding the conceptual difficulties students have in moving from whole numbers to rational numbers, additive thinking to multiplicative thinking, and arithmetic to algebra. Problem-solving, connections, and concrete models are emphasized. The particular content knowledge needed for teaching will be integrated in this course with general and content-specific pedagogies. Issues of planning, instruction, and assessment will be discussed. Field experiences in the form of small group instruction will support these discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MGRE 5405. Teaching Science in the Middle Grades. 3 Credit Hours.**

This course will focus on the "big ideas" in the sciences as appropriate for the middle grades. Special attention will be paid to understanding the pre- and mis-conceptions that middle-level students hold. Scientific inquiry and its associated process skills will be emphasized. The particular content knowledge needed for teaching will be integrated in this course with general and content-specific pedagogies. Issues of planning, instruction, and assessment will be discussed. Field experiences in the form of small-group instruction and isolated whole-group instruction will support these discussions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Music (MUSC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MUSC 5000. Recital Extension. 2 Credit Hours.**

Extension of private applied lessons beyond performance curriculum requirements on both undergraduate and graduate levels in order to complete preparation for the graduation recital. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses. NOTE: Not applicable toward degree. Offered on pass/fail basis only. Private lesson fee: \$500.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5152. Swing Owls Campus Community Jazz Band. 1 Credit Hour.**

The Swing Owls is a jazz band comprised of Temple University students (majors and non-majors) and members of the Greater Philadelphia Community. No audition is required for membership. The ensemble meets one evening per week, totaling two hours of rehearsal, and performs a concert at the end of each semester. Members may elect to participate for Temple University academic credit or pay a nominal fee to join as a community member (course credit is not transcribed in the latter choice). NOTE: Ability to read music is required; personally owned instrument or rental needed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5201. Applied Vocal Graduate Minor. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5202. Applied Vocal Graduate Minor. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5203. Applied Vocal Graduate Minor. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5279. Career Planning for the Classical Singer. 1 Credit Hour.**

To pursue a career as a professional classical singing actor, an extensive range of skills is demanded of the singer. It is only through high caliber training, unshakeable dedication, a commitment to musical and artistic excellence, and effective management that those careers are made. This course will provide a comprehensive survey of the varied extra-musical skills and knowledge one needs to plan a career as a viable, professional singer.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5310. Choral Ensemble. 1 Credit Hour.**

Advanced performance of standard choral literature. At least one public performance per semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5352. Singing Owls Campus/Community Choir. 0 to 1 Credit Hours.**

The Singing Owls is a chorus comprised of Temple University students and members of the Greater Philadelphia community, and is open to all without audition. The ensemble rehearses once weekly and performs once per semester. Repertoire is varied and diverse. Members may elect to participate for Temple University academic credit or pay a nominal fee to join as a community member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5401. Applied Keyboard Graduate Minor. 2 Credit Hours.**

Advanced private keyboard instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5402. Applied Keyboard Graduate Minor. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5403. Applied Keyboard Graduate Minor. 2 Credit Hours.**

Advanced studio private instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in MUSC 5402.

**MUSC 5431. Alexander Technique Introduction. 1 Credit Hour.**

This course offers a basic understanding of the history and principles of the Alexander Technique. It is designed to enable the student to enhance expression and performance skills, prevent injuries, and develop healthy practice and rehearsal techniques. The technique offers a practical solution to ongoing issues with pain and fatigue, effective expression and intonation, breath support and stage presence. The principles can be applied to all areas of creative expression, from instrumental, vocal and dance technique, to acting, writing, painting and sculpting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5480. Special Topics in Music. 1 to 3 Credit Hour.**

Advanced study in a faculty-and-department-approved performance area/topic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5501. Applied Instrumental Graduate Minor. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5502. Applied Instrumental Graduate Minor. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5503. Applied Instrumental Graduate Minor. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5524. Advanced Conducting. 2 Credit Hours.**

Advanced ensemble conducting techniques for various ensemble formats. Score study and preparation. Conducting of varied ensembles with repertoire at varying levels of difficulty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 5552. Samba Owls. 1 Credit Hour.**

A fun, high-energy musical ensemble exploring the rhythms, sounds, and movement of Brazil's samba schools. Participants will learn actively as a performing member of a *batucada*, the traditional percussion ensemble of the samba groups. Students are involved in rhythm, drumming, movement, and singing/vocalization. There are no musical prerequisites - anyone is welcome to join.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5556. Hand Percussion Techniques for Drummers, Dancers and Concert Percussionists. 1 to 2 Credit Hour.**

The course will cover techniques and basic patterns for the conga drums, bongos, timbal, and afro-cuban accessory percussion instruments. Students will be introduced to concepts from the Latin and Caribbean musical traditions, receive hands-on training and develop practical performance skills on a variety of instruments, and increase their awareness and understanding of the appropriate use of these instruments in different musical ensembles.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5560. Seminar in Guitar Performance and Literature. 1 to 2 Credit Hour.**

Advanced exploration of issues related to performance. Advanced analysis of representative works. Attention to problems of transcription and performance practice. Student researched presentations on historical topics. Performance of representative guitar chamber and ensemble literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5571. International Exchange Applied Instrumental Lesson. 3 Credit Hours.**

Weekly advanced private instrumental studio lessons with a major teacher for graduate international exchange students. Culminates in an end-of-semester jury. Open only to International Exchange students. Students are required to perform in various formats/venues outside the university.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5572. International Exchange Applied Voice Lesson. 3 Credit Hours.**

Weekly advanced voice private lesson with major teacher. Open only to International Exchange students. Culminates in an end-of-semester jury. Students are required to perform outside the university.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5573. International Exchange Large Ensemble. 1 Credit Hour.**

Large ensemble with scheduled rehearsals and public performances. May include: symphony orchestra, wind symphony, symphonic band, choral ensembles, jazz band, jazz lab band, vocal jazz ensemble, early music ensemble, and new music ensemble.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5574. International Exchange Small Ensemble. 1 Credit Hour.**

Small ensembles with scheduled rehearsals and public performances. May include: chamber ensembles, percussion ensemble, new music ensemble, choral ensembles, and jazz ensembles.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 5652. Owlchestra Campus Community String Orchestra. 1 Credit Hour.**

The Owlchestra is a string orchestra comprised of Temple University students (majors and non-majors) and members of the Greater Philadelphia Community. No audition is required for membership. The ensemble meets one evening per week, totaling two hours of rehearsal, and performs a concert at the end of each semester. Members may elect to participate for Temple University academic credit or pay a nominal fee to join as a community member (course credit is not transcribed in the latter choice). NOTE: Ability to read music is required; personally owned instrument or rental needed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8000. Continuing Registration Status. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8004. Piano Major Concentration in Pedagogy. 2 Credit Hours.**

Private lessons for graduate Piano Pedagogy majors. One-hour lesson each week plus performance class. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8014. Piano Major Concentration in Pedagogy. 2 Credit Hours.**

Private lessons for graduate Piano Pedagogy majors. One-hour lesson each week plus performance class. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8004.

**MUSC 8024. Piano Major Concentration in Pedagogy. 2 Credit Hours.**

Private lessons for graduate Piano Pedagogy majors. One-hour lesson each week plus performance class. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8014.

**MUSC 8084. Piano Major Concentration in Pedagogy (Recital). 3 Credit Hours.**

Private lessons for graduate Piano Pedagogy majors culminating in a recital. One-hour private lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8024.

**MUSC 8180. Special Topics in Percussion. 1 to 3 Credit Hour.**

This course is designed to provide the opportunity for students to acquire important and practical knowledge and experience in areas of percussion not covered in other courses. Subjects include instrument design, maintenance and repair, and Latin Percussion. Content may vary each semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8204. Voice Major. 3 Credit Hours.**

Private lessons for graduate Voice majors. One-hour private lesson each week plus performance class. Jury at the end of the semester. Full recital during final year of study.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8205. Musical Theater Voice and Acting. 1 to 3 Credit Hour.**

Advanced work in the application of performance techniques to specific songs from the American Musical Theater of the first half of the 20th century. The incorporation of truthful acting with attention to given circumstances and objectives is blended with principles of healthy, supported singing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8206. Musical Theater Scene Study. 1 to 3 Credit Hour.**

Advanced work in the application of performance techniques to specific scenes from the American Musical Theater provides further development for the student of musical theater. Vocal and acting skills are combined with the development of character in musical play scene-work including both song and dialogue. Students spend the semester in collaboration with fellow students on notable and challenging scenes from the musical theater.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8207. Vocal Pedagogy for the Choral Conductor. 2 Credit Hours.**

Topics will be relevant to teaching singing. The history of singers, singing styles, teachers, and teaching styles will be discussed. The basic science of singing, anatomy, health and basic acoustical models will be covered. There will be an exploration of methods of studio teaching and the application of these methods to private students. Graduate students in choral conducting will apply concepts and knowledge toward preparing choral rehearsals and preparing teaching materials for an undergraduate voice class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8210. Opera Ensemble. 0 to 1 Credit Hours.**

Required for singers cast in Temple University Opera Theater productions.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8211. Opera Coaching. 2 Credit Hours.**

Private lessons for graduate Opera majors. One-hour private lesson each week. Emphasis on interpretation, diction, and style through study of operatic aria repertoire and/or operatic role study. May be taken one time only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8212. Coaching Skills. 2 Credit Hours.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8213. Opera Diction. 2 Credit Hours.**

Designed to apply general knowledge about the International Phonetic Alphabet and the flavors of French, Italian, German, and English diction directly to repertoire. Emphasis on the expressive projection of text in singing. Singers must prepare at least one aria in each language.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8214. Voice Major. 3 Credit Hours.**

Private lessons for graduate Voice majors. One-hour private lesson each week plus performance class. Jury at the end of the semester. Full recital during final year of study.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8204.

**MUSC 8215. Vocal Coaching. 2 Credit Hours.**

Emphasis on style, diction, phrasing, and performance traditions in preparation for the master's degree recital. May be taken one time only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8216. Aria Repertoire. 2 Credit Hours.**

Required course for all Opera majors; others by permission of the instructor.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8217. Vocal Pedagogy for the Choral Conductor. 2 Credit Hours.**

To equip choral conductors with the understanding of the vocal mechanism and the need to promote healthy singing through the choral experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8220. Opera Workshop. 2 Credit Hours.**

Voice and Opera majors only. Gives singers practical experience on the stage and performance of operatic roles.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8224. Voice Major. 3 Credit Hours.**

Private lessons for graduate Voice majors. One-hour private lesson each week plus performance class. Jury at the end of the semester. Full recital during final year of study.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8214.

**MUSC 8231. Opera Role Preparation. 3 Credit Hours.**

For Professional Studies majors only. Preparation for performances of Opera roles directed by the Temple University Opera Theater faculty, with laboratory experience through participation in Opera Theater.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8232. Opera Role Preparation. 3 Credit Hours.**

For Professional Studies majors only. Preparation for performances of Opera roles directed by the Temple University Opera Theater faculty, with laboratory experience through participation in Opera Theater.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8233. Vocal Coaching: Professional Studies. 2 Credit Hours.**

Vocal coaching for Professional Studies Voice or Opera majors only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8234. Opera Major. 2 Credit Hours.**

Private lessons for graduate Opera majors. One-hour lesson each week plus performance class. Jury at the end of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8235. Opera Vocal Lessons. 2 Credit Hours.**

For Professional Studies majors only. One-hour private lesson each week. Jury at the end of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.



**MUSC 8236. Opera Vocal Lessons. 2 Credit Hours.**

For Professional Studies majors only. One-hour private lesson each week. Jury at the end of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8235.

**MUSC 8244. Opera Major. 2 Credit Hours.**

Private lessons for graduate Opera majors. One-hour lesson each week plus performance class. Jury at the end of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8234.

**MUSC 8245. Vocal Literature: Renaissance and Baroque. 2 Credit Hours.**

A singer's examination of repertoire for solo voice beginning with the song literature of the Middle Ages and concluding with Baroque Opera.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8246. Vocal Literature: Classical/Bel Canto. 2 Credit Hours.**

Examination of opera and concert repertoire in the bel canto style, with emphasis on Mozart, Bellini, Donizetti, and Rossini. Art of vocal embellishment and cadenza writing. Opportunity to implement skills through class performance. Studies in historical context as well as harmonic and textual analysis.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8247. Vocal Literature: German Romantic. 2 Credit Hours.**

Survey of the German solo vocal repertoire of the Romantic period, with detailed studies of the major works.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8248. Vocal Literature: French Romantic. 2 Credit Hours.**

Survey of the French solo vocal repertoire of the Romantic period, with detailed studies of the major works.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8249. Vocal Literature: Contemporary. 2 Credit Hours.**

The foundation for this course is an overview of the vocal repertoire of the 20th and 21st centuries, which will examine the changing role of the singer in contemporary music.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8254. Opera Major. 2 Credit Hours.**

Private lessons for graduate Opera majors. One-hour lesson each week plus performance class. Jury at the end of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8244.

**MUSC 8264. Opera Major. 2 Credit Hours.**

Private lessons for graduate Opera majors. One-hour lesson each week plus performance class. Jury at the end of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8254.

**MUSC 8274. Opera Role Performance. 1 Credit Hour.**

Master's degree students in Opera must demonstrate mastery of the music/characterization of two adjudicated opera roles. This is fulfilled through performance of a role in Temple University Opera Theater productions designated as a major role or by passing a pre-approved performance examination.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8279. Career Planning for the Classical Singer. 1 Credit Hour.**

To pursue a career as a professional classical singing actor, an extensive range of advanced skills is required. It is only through high caliber training, unshakeable dedication, a commitment to musical and artistic excellence, and effective management that those careers are made. This course will provide a comprehensive survey of the varied extra-musical skills and advanced knowledge needed to plan a career as a viable, professional singer.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8284. Voice Major-Recital. 3 Credit Hours.**

Private lessons for graduate Voice majors. One-hour private lesson each week. Jury at the end of the semester. Full recital during final year of study.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8224.

**MUSC 8300. Concert Choir. 0 to 1 Credit Hours.**

By audition only. Select ensemble with significant performance schedule, including tours.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8310. Choral Ensemble. 1 Credit Hour.**

Advanced performance of standard choral literature. At least one public performance per semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8320. Special Topics: Choral Music. 1 to 3 Credit Hour.**

Literature, analysis, conducting, and related skills.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8351. Choral Conducting Seminar I. 2 Credit Hours.**

Advanced course for the graduate student who is active in the choral field. Designed to refine skills of conducting technique, rehearsal and program planning, research and analysis, observation, and practical application.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8352. Choral Conducting Seminar II. 2 Credit Hours.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8351.

**MUSC 8353. Choral Conducting Seminar III. 2 Credit Hours.**

Culminates in the first of two public recitals.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8352.

**MUSC 8354. Choral Conducting Seminar IV. 2 Credit Hours.**

Culminates in the second of two public recitals.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8353.

**MUSC 8356. Choral Literature: Early Period. 2 Credit Hours.**

Study of choral works from the 15th century through Renaissance period. Emphasis on analysis, conducting, interpretation, and performance practices.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8357. Choral Literature: Classic and Romantic Periods. 2 Credit Hours.**

Study of choral works from the Classic and Romantic periods. Analysis, conducting, interpretation, performance practices, and historical context emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8358. Choral Literature: Baroque Period. 2 Credit Hours.**

Study of choral works from the Baroque period. Survey plus in-depth study of several major works.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8359. Choral Literature: 1910 to the Present. 2 Credit Hours.**

Study of choral works from precursors to Impressionism to the current avant garde.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8361. Choral Literature 1450-1610. 2 Credit Hours.**

Study of choral works from the 15th century through Renaissance period. Emphasis on analysis, conducting, interpretation, and performance practices.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8362. Choral Literature 1610-1910. 2 Credit Hours.**

Study of choral works from the Classic and Romantic periods. Analysis, conducting, interpretation, performance practices, and historical context emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8363. Choral Literature 1910-Present. 2 Credit Hours.**

Advanced study of major and minor choral works from Impressionism to current practice which expands engagement with choral literature to include music outside the Western European canon and enables comprehensive advanced conducting skills development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8364. Choral Literature in the Global Community. 2 Credit Hours.**

A survey of choral music from different cultures throughout the world including North America, Latin America, Eastern Europe and Israel, West and Central Asia, East Asia, South and Southeastern Asia, Oceania, and Africa. Choral music outside the classical canon will include works in jazz and gospel styles, African-American spirituals, and music by women composers. Additionally, topics concerning today's global choral community will also be discussed.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8384. Private Lesson: Choral Conducting Major. 1 Credit Hour.**

For graduate Choral Conducting majors only. Private lessons in preparation for graduation recital performances with the Graduate Conductors' Chorus and the Recital Chorus.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Choral Conducting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in MUSC 8351.

**MUSC 8404. Piano Major. 3 Credit Hours.**

Private lessons for graduate Piano majors. One-hour lesson each week plus performance class. Full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8414. Piano Major. 3 Credit Hours.**

Private lessons for graduate Piano majors. One-hour lesson each week plus performance class. Full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8404.

**MUSC 8416. Piano for Accompanying and Chamber Music Majors. 2 Credit Hours.**

Private lessons for graduate Piano Accompanying and Chamber Music majors. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. One-hour lesson each week plus performance class.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8417. Piano for Accompanying and Chamber Music Majors. 2 Credit Hours.**

Private lessons for graduate Piano Accompanying and Chamber Music majors. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. One-hour lesson each week plus performance class.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8416.

**MUSC 8418. Piano for Accompanying and Chamber Music Majors. 2 Credit Hours.**

Private lessons for graduate Piano Accompanying and Chamber Music majors. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. One-hour lesson each week plus performance class.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8417.

**MUSC 8419. Piano for Accompanying and Chamber Music Majors. 2 Credit Hours.**

Private lessons for graduate Piano Accompanying and Chamber Music majors. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. One-hour lesson each week plus performance class.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8418.

**MUSC 8424. Piano Major. 3 Credit Hours.**

Private lessons for graduate Piano majors. One-hour lesson each week plus performance class. Full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8414.

**MUSC 8441. Seminar in Early Keyboard Instruments I. 3 Credit Hours.**

For harpsichordists interested in expanding their knowledge of the repertoire as well as pianists wishing to gain harpsichord experience. The study, preparation, and performance of harpsichord and fortepiano literature in relation to the instrument itself and the historical context.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8442. Seminar in Early Keyboard Instruments II. 3 Credit Hours.**

Harpichord study focusing on the works of J.S. Bach. Fortepiano study will begin before midterm, with a study of the instrument itself and performance of classical piano works of Haydn, Mozart, Beethoven, and lesser-known composers of the period.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8441.

**MUSC 8443. Listening/Learning Skills: Piano I. 3 Credit Hours.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8444. Listening/Learning Skills: Piano II. 3 Credit Hours.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8461. Piano Pedagogy I. 2 Credit Hours.**

Designed to equip teachers to train intermediate and advanced piano students. Investigation of materials relevant to teaching at this level.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8462. Class Piano Pedagogy. 2 Credit Hours.**

Techniques involved in teaching group piano; survey of available methods and materials; student teaching under supervision of instructor.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8463. Class Piano Practice Teaching II. 2 Credit Hours.**

Practicum in class piano teaching under supervision of professor, with weekly meetings on methodology and materials.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8462.

**MUSC 8464. Pedagogy of Technique. 2 Credit Hours.**

Developing clear and intelligent pedagogical methods for all aspects of piano technique. Historical development of keyboard technique is reviewed; an overview of fundamental physiological principles involved in playing the piano is presented.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8465. Piano Pedagogy II. 2 Credit Hours.**

Exploration of advanced topics in teaching piano to students at intermediate to advanced levels of ability.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8461.

**MUSC 8466. Piano Pedagogy. 2 Credit Hours.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8467. American Piano Pedagogy. 1 Credit Hour.**

A series of six one-semester independent studies to be taken by international graduate piano students, both master's and doctoral level, who received the major share of their training outside of the United States. Lessons familiarize them with: 1. American pedagogical method books; 2. American technical approaches; 3. American teaching materials for children; 4. American teaching materials for adults; 5. contemporary American keyboard literature; 6. how American competitions and job interviews are conducted. 7. how American pianists engage different pedagogical situations in various settings beyond the university which include teaching, conducting, and accompanying both individuals and groups. In addition to researching the above subjects through reading assignments, students are required to teach the piano actively outside the university and to write a paper at the end of the course summarizing differences between American methods and materials and those of their native lands.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Performance, Piano Accp-Opera Coach, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8471. Recital Accompanying. 1 Credit Hour.**

Practical experience in vocal and/or instrumental accompanying and chamber music.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8472. Recital Accompanying. 1 Credit Hour.**

Practical experience in vocal and/or instrumental accompanying and chamber music.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8471.

**MUSC 8473. Recital Accompanying. 1 Credit Hour.**

Practical experience in vocal and/or instrumental accompanying and chamber music.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8472.



**MUSC 8474. Recital Accompanying. 1 Credit Hour.**

Practical experience in vocal and/or instrumental accompanying and chamber music.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8473.

**MUSC 8475. Studio Accompanying. 1 Credit Hour.**

Practical accompanying experience in voice studio, with emphasis on repertoire building.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Accp-Chmbr Music, Piano Accp-Opera Coach, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8476. Suzuki for Pianists. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8477. Baroque Keyboard Performance Practice. 3 Credit Hours.**

A workshop approach to seeking ideas and solutions for stylistic and artistic performance of Baroque keyboard music. The writings of Frescobaldi, Couperin, and Quantz are compared to their musical compositions for direct experience in applying historical concepts to performance. Additional readings and music address general topics, such as embellishment, touch, and rhythmic conventions in the music of J.S. Bach.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8478. Classical Keyboard Performance Practice. 3 Credit Hours.**

A workshop approach to seeking ideas and solutions for stylistic and artistic performance of Classical keyboard music. The writings of C.P.E. Bach, Turk, and Clementi are compared to their musical compositions for direct experience in applying historical concepts to performance. Additional readings and music address general topics, such as ornamentation, pedaling, and tempo in the music of Haydn, Mozart, and Beethoven.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8479. Romantic Performance Practice: The Schumanns, Chopin, and Brahms. 3 Credit Hours.**

This seminar will focus on historically aware interpretations of keyboard, vocal, and chamber music by the Schumanns, Chopin, and Brahms. Special attention will be paid to the roles of improvisation, dance, and earlier instruments, along with questions of tempo, articulation, and rubato. Assignments will include reading, listening, and class performance.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8480. Special Topics in Music. 1 to 3 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8484. Piano Major-Recital. 3 Credit Hours.**

Private lessons for graduate Piano majors. One-hour lesson each week plus performance class. Full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Piano Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8424.

**MUSC 8500. Instrumental Ensemble. 1 Credit Hour.**

By audition only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8504. Instrumental Major. 3 Credit Hours.**

Private lessons for graduate Instrumental majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8510. Instrumental Ensemble. 1 Credit Hour.**

By audition only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8514. Instrumental Major. 3 Credit Hours.**

Private lessons for graduate Instrumental majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8504.

**MUSC 8520. Wind Chamber Symphony. 1 Credit Hour.**

Singers selected from Concert Choir. Stipend may be available. Two performances per semester with graduate Conducting majors.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8524. Instrumental Major. 3 Credit Hours.**

Private lessons for graduate Instrumental majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8414.

**MUSC 8535. Private Lessons: Instrumental Conducting Major. 2 Credit Hours.**

Private lessons and work with the Wind Symphony and Symphonic Band will lead to two public performances—one including large chamber wind pieces with select members of winds, brass, strings, and percussion students, and the other including several concert band pieces with the Wind Symphony and Symphonic Band. Performance schedule will extend across the academic year.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Instrument Conductng Wind Band.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Music.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8536. Private Lessons: Instrumental Conducting Major. 2 Credit Hours.**

Private lessons and work with the Wind Symphony and Symphonic Band will lead to two public performances—one including large chamber wind pieces with select members of winds, brass, strings, and percussion students, and the other including several concert band pieces with the Wind Symphony and Symphonic Band. Performance schedule will extend across the academic year.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Instrument Conductng Wind Band.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Music.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8535.

**MUSC 8537. Private Lessons: Instrumental Conducting Major. 2 Credit Hours.**

Private lessons and work with the Wind Symphony and Symphonic Band will lead to two public performances—one including large chamber wind pieces with select members of winds, brass, strings, and percussion students, and the other including several concert band pieces with the Wind Symphony and Symphonic Band. Performance schedule will extend across the academic year.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Instrument Conductng Wind Band.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Music.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8535 and MUSC 8536.

**MUSC 8538. Private Lessons: Instrumental Conducting Major. 2 Credit Hours.**

Private lessons and work with the Wind Symphony and Symphonic Band will lead to two public performances—one including large chamber wind pieces with select members of winds, brass, strings, and percussion students, and the other including several concert band pieces with the Wind Symphony and Symphonic Band. Performance schedule will extend across the academic year.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Instrument Conductng Wind Band.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Music.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8535, MUSC 8536, and MUSC 8537.

**MUSC 8539. Instrumental Conducting Seminar: Score Analysis, Programming & Interpretation of Wind Ensemble Lit. 2 Credit Hours.**

Focus on score study, programming, rehearsal techniques and advancement of personal interpretation specifically related to the wind ensemble and its literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8541. Advanced Orchestral Conducting I-II. 2 Credit Hours.**

Rehearsal techniques of the symphony orchestra: gestures, right and left hand techniques. Emphasis on advanced repertoire. Methods of preparation of a score for concert performance. Introduction of concepts of string bowings and their applications. Opportunities to rehearse an orchestra.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8544. Wind Repertory in History: European Antiquity through the 21st Century. 2 Credit Hours.**

This course will survey the development and repertory of wind-band music from European Antiquity through the present day. Course topics will include the examination and analysis of the development of instruments, cornerstone pieces in each period, performance practice considerations, commissioning projects, current state of wind-band performance opportunities, varied styles of concert programming, audio identification, and developing strategies to determine quality repertory for the medium.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8545. History of Wind and Brass Chamber Music. 2 or 3 Credit Hours.**

This class traces the use and development of small wind/brass chamber ensembles from the Middle Ages to the present. Consort types to be studied include the medieval waits; renaissance stadtpfeiffers; baroque oboe bands; classical harmonie, especially the Vienna Octet; 19th- and 20th-century woodwind and brass ensembles, especially quintets; and works for combinations of winds and brass. Emphasis is placed on their literature and listening to repertoire.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8546. Viola for Violinists. 1 Credit Hour.**

Designed for Violin Performance or Education majors. Covers basic differences between playing violin and viola. Students should provide their own viola if possible.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8551. Percussion History, Development and Performance Practices. 2 to 3 Credit Hours.**

The course is designed to enable students to engage the informational resources, general history, and performance practice of percussion in the traditional, Non-Western and contemporary contexts.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8552. Percussion Pedagogy. 2 to 3 Credit Hours.**

This course is designed to enable students to develop the necessary knowledge and skills to make intelligent and informed decisions about the teaching of percussion instruments. Students analyze, compare, and critique curricula, teaching modalities, performance practices, methods, materials, and literature.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8553. Multi-Percussion in the Orchestra. 1 to 2 Credit Hour.**

This course enables students to develop the complex skills necessary to perform multi-percussion and drum set parts in the symphony and chamber orchestra settings. Sample works to be covered include Creation of the World (Milhaud), L'Histoire du Soldat (Stravinsky), West Side Story Suite (Berstein), Facade (Walton), American in Paris (Gershwin), and works from the jazz and popular music styles.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8554. Orchestral Repertoire: Percussion. 1 or 2 Credit Hour.**

Orchestra repertoire is designed to prepare students at a professional level for the specific demands of orchestral performance and auditions.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8555. Orchestral Repertoire. 1 Credit Hour.**

Weekly reading workshop to acquaint orchestral players with standard orchestral repertoire and playing techniques.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8556. Afro-Cuban Percussion Techniques. 2 Credit Hours.**

A practical study in the musical language and percussive traditions of Afro-Cuban and Latin American music. The goal is to equip the learner with greater knowledge, understanding, and practical performance skills with regard to percussion instruments of the Afro-Cuban musical traditions. Students will engage in group performance and improvisation and will hone ensemble and presentation skills. The course experience is largely a "hands-on" lab; therefore, students are required to attend the weekly meetings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8561. Lower String Pedagogy. 2 to 3 Credit Hours.**

Examination of problems in playing and presentation of developmental and remedial teaching techniques; exploration of solo literature and available teaching materials from beginning through advanced levels.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8562. Upper String Pedagogy. 2 to 3 Credit Hours.**

Examines problems and teaching techniques, solo and ensemble literature, and available teaching materials at beginning through advanced levels.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8566. String Major/Pedagogy. 2 Credit Hours.**

Private lessons for graduate String Pedagogy majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8567. String Major/Pedagogy. 2 Credit Hours.**

Private lessons for graduate String Pedagogy majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8566.

**MUSC 8568. String Major/Pedagogy. 2 Credit Hours.**

Private lessons for graduate String Pedagogy majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8567.

**MUSC 8569. String Major/Pedagogy. 2 Credit Hours.**

Private lessons for graduate String Pedagogy majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8568.

**MUSC 8571. Studio Ensemble Pedagogy I. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8579. Orchestra Audition Prep. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 8584. Instrumental Major (Recital). 3 Credit Hours.**

Private lessons for graduate Instrumental majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8524.

**MUSC 8611. Harpsichord for Pianists. 3 Credit Hours.**

A practical introduction to performance on the harpsichord for pianists with little or no experience with historical keyboards. Topics include history, technique and repertoire from ca. 1500-present.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8904. Harpsichord Major. 3 Credit Hours.**

Private lessons for graduate Harpsichord majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 8914. Harpsichord Major. 3 Credit Hours.**

Private lessons for graduate Harpsichord majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8904.

**MUSC 8924. Harpsichord Major. 3 Credit Hours.**

Private lessons for graduate Harpsichord majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8914.

**MUSC 8984. Harpsichord Major. 3 Credit Hours.**

Private lessons for graduate Harpsichord majors. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 8924.

**MUSC 9001. Appl Music-Prof Studies. 4 Credit Hours.**

Private lessons for graduate Professional Studies majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9002. Appl Music-Prof Studies. 4 Credit Hours.**

Private lessons for graduate Professional Studies majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9001.

**MUSC 9004. Doctoral String Major. 3 Credit Hours.**

Private lessons for doctoral String majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9011. Doctoral Chamber Music. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9012. Doctoral Chamber Music. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9013. Doctoral Chamber Music. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9014. Doctoral String Major. 3 Credit Hours.**

Private lessons for doctoral String majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9004.



**MUSC 9021. Chamber Music. 1 Credit Hour.**

Advanced performance activities in small ensembles of various sizes and instrumentation.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9024. Doctoral String Major. 3 Credit Hours.**

Private lessons for doctoral String majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9014.

**MUSC 9034. String Major Doctorate. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9024.

**MUSC 9101. Professional Studies. 4 Credit Hours.**

Private lessons for graduate Professional Studies majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MUSC 9001 and MUSC 9002)

**MUSC 9102. Professional Studies. 4 Credit Hours.**

Private lessons for graduate Professional Studies majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MUSC 9001, MUSC 9002, and MUSC 9101)

**MUSC 9104. Historical Keyboard Instruments Major/Doctoral. 3 Credit Hours.**

Private lessons for doctoral Historical Keyboard majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. This course emphasizes the preparation of advanced performers who specialize in historic performance on period keyboard instruments. The goals are performance at the highest professional level and the incorporation of historical performance and advanced theoretical skills. This course is a central component of the major.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9114. Historical Keyboard Instruments Major/Doctoral. 3 Credit Hours.**

Private lessons for doctoral Historical Keyboard majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. This course emphasizes the preparation of advanced performers who specialize in historic performance on period keyboard instruments. The goals are performance at the highest professional level and the incorporation of historical performance and advanced theoretical skills. This course is a central component of the major.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUSC 9104.

**MUSC 9124. Historical Keyboard Instruments Major/Doctoral. 3 Credit Hours.**

Private lessons for doctoral Historical Keyboard majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. This course emphasizes the preparation of advanced performers who specialize in historic performance on period keyboard instruments. The goals are performance at the highest professional level and the incorporation of historical performance and advanced theoretical skills. This course is a central component of the major.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUSC 9114.

**MUSC 9134. Historical Keyboard Instruments Major/Doctoral. 3 Credit Hours.**

Private lessons for doctoral Historical Keyboard majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations. This course emphasizes the preparation of advanced performers who specialize in historic performance on period keyboard instruments. The goals are performance at the highest professional level and the incorporation of historical performance and advanced theoretical skills. This course is a central component of the major.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUSC 9124.

**MUSC 9182. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9184. DMA Solo Public Recital. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9204. Voice Major/Doctoral. 3 Credit Hours.**

One-hour weekly lesson for matriculated doctoral students only. Diagnostic jury at the end of the semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9210. Special Topics in Voice. 3 Credit Hours.**

For DMA Voice Performance majors only. A seminar for singers. Emphasizes vocal technique as it relates to performance practice. Detailed examination of repertoire from selected historical periods.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9214. Voice Major/Doctoral. 3 Credit Hours.**

One-hour weekly lesson for matriculated doctoral students only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9024.

**MUSC 9220. Special Topics in Voice. 3 Credit Hours.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9224. Voice Major/Doctoral. 3 Credit Hours.**

One-hour weekly lesson for matriculated doctoral students only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9214.

**MUSC 9230. Special Topics in Voice. 2 Credit Hours.**

For DMA Voice Performance majors only. A seminar for singers. Emphasizes vocal technique as it relates to performance practice. Detailed examination of repertoire from selected historical periods.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9234. Voice Major Doctorate. 3 Credit Hours.**

One-hour weekly lesson for matriculated doctoral students only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9224.

**MUSC 9240. Special Topics in Voice. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9250. Special Topics in Vocal Pedagogy. 2 or 3 Credit Hours.**

For DMA Voice Performance majors only. Specialized research regarding various aspects of vocal pedagogy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9251. Voice Pedagogy. 2 Credit Hours.**

For DMA Voice Performance majors only. A survey of vocal pedagogical literature combined with studies in the elements of voice science.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9261. Vocal Pedagogy I. 2 Credit Hours.**

For DMA Voice Performance majors only. Detailed studies of pedagogical literature combined with studies in the elements of voice science.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9262. Vocal Pedagogy II. 2 or 3 Credit Hours.**

For DMA Voice Performance majors only. A continuation of MUSIC 9261.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9263. Advanced Vocal Pedagogy. 2 or 3 Credit Hours.**

For DMA Voice Performance majors only. Examines problems in teaching techniques as applied to solo vocal literature.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9351. Performance Traditions. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9384. DMA Chamber Recital. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9404. Piano Major/Doctoral. 3 Credit Hours.**

One-hour weekly lesson plus performance class for matriculated doctoral students only. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9414. Piano Major/Doctoral. 3 Credit Hours.**

One-hour weekly lesson plus performance class for matriculated doctoral students only. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9404.

**MUSC 9424. Piano Major/Doctoral. 3 Credit Hours.**

One-hour weekly lesson plus performance class for matriculated doctoral students only. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9414.

**MUSC 9434. Piano Major Doctorate. 3 Credit Hours.**

One-hour weekly lesson plus performance class for matriculated doctoral students only. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9424.

**MUSC 9451. Keyboard Literature-Doctoral. 2 Credit Hours.**

An intensive study of problem areas of piano literature: stylistic transitional periods, composers' notational idiosyncrasies, tempo concepts, etc.; the relationship of piano music to music for other media and to other art forms; the role of analysis in interpretation. Specific composers' output is examined in depth.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9452. Keyboard Literature-Doctoral. 2 Credit Hours.**

An intensive study of problem areas of piano literature: stylistic transitional periods, composers' notational idiosyncrasies, tempo concepts, etc.; the relationship of piano music to music for other media and to other art forms; the role of analysis in interpretation. Specific composers' output is examined in depth.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9453. Keyboard Literature-Doctoral. 2 Credit Hours.**

An intensive study of problem areas of piano literature: stylistic transitional periods, composers' notational idiosyncrasies, tempo concepts, etc.; the relationship of piano music to music for other media and to other art forms; the role of analysis in interpretation. Specific composers' output is examined in depth.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9454. Keyboard Literature-Doctoral. 2 Credit Hours.**

An intensive study of problem areas of piano literature: stylistic transitional periods, composers' notational idiosyncrasies, tempo concepts, etc.; the relationship of piano music to music for other media and to other art forms; the role of analysis in interpretation. Specific composers' output is examined in depth.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9461. Piano Pedagogy. 2 Credit Hours.**

Study of the teaching of difficult works of piano literature: virtuoso pieces, large-scale concertos, sonatas, and other works. Style, structure, and technique are explored.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9504. Doctoral Instrumental Major. 3 Credit Hours.**

Private lessons for doctoral Instrumental majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9514. Doctoral Instrumental Major. 3 Credit Hours.**

Private lessons for doctoral Instrumental majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9504.

**MUSC 9515. Technical and Interpretive Seminar-Strings. 2 Credit Hours.**

Comprehensive analysis of 17th- and 18th-century works for unaccompanied strings.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9516. Seminar for String Literature. 2 Credit Hours.**

Comprehensive study of the major string works of selected composers and genres. Solo and chamber works.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9517. Advanced Conducting-Doctoral. 2 Credit Hours.**

Detailed analysis of scores as if in preparation for a concert. Emphasis on interpretation and refinement of baton technique. Practical rehearsal procedures are covered, and Philadelphia Orchestra rehearsals are attended when possible.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9524. Doctoral Instrumental Major. 3 Credit Hours.**

Private lessons for doctoral Instrumental majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9514.

**MUSC 9534. Doctoral Instrumental Major. 3 Credit Hours.**

Private lessons for doctoral Instrumental majors. One-hour lesson each week. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUSC 9524.

**MUSC 9561. Single Reed Woodwind Ped. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9562. Double Reed Woodwind Pedagogy. 2 Credit Hours.**

Designed to apply principles of private instruction to the major instrument of study with regard to methodology, literature, stylistic concepts, technique, and transcription.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9563. Upper String Pedagogy. 3 Credit Hours.**

Examination of problems in playing and teaching techniques. Explores solo and ensemble literature, as well as available teaching materials at beginning through advanced levels.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9564. Flute Pedagogy. 2 Credit Hours.**

Designed to apply principles of private instruction to the major instrument of study with regard to methodology, literature, stylistic concepts, technique, and transcription.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9565. Lower Brass Pedagogy. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9566. Upper Brass Pedagogy. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9567. Lower String Pedagogy. 2 to 3 Credit Hours.**

Advanced examination of problems in playing and teaching techniques. Explores solo and ensemble literature, as well as available teaching materials at beginning through advanced levels.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Performance, String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9587. Practicum: String Pedagogy. 2 Credit Hours.**

For String Pedagogy majors only. Application of methods and repertoire to the teaching of String students in actual classroom and private settings.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance, String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9684. DMA Lecture-Recital. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9701. Doct Perf Practice I. 2 or 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.



**MUSC 9702. Doct Perf Practice II. 2 or 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9784. DMA Performance with Orchestra. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9884. DMA Major Opera Role. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9984. DMA Final Recital. 1 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9995. Final Project in Music. 0 to 2 Credit Hours.**

Designed with assistance of the advisor. Demonstrates specialized study in a specific area but may include a lecture/recital, teaching demonstration, research paper, or article.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUSC 9996. Final Project: String Pedagogy. 2 Credit Hours.**

Final project for master's String Pedagogy majors, designed with assistance of the advisor. Demonstrates specialized study in a specific pedagogical area. Final presentations vary among majors, but typically include a lecture/recital, teaching demonstration, research paper, article, or method book.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: String Pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Registration required each semester after Preliminary Examinations while researching the dissertation proposal.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUSC 9999. Monograph Research. 1 to 6 Credit Hour.**

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Music Education (MUED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MUED 5168. Student Teaching Seminar. 2 Credit Hours.**

Seminar for graduate certificate music education students enrolled in Music Education 5189 and/or Music Education 5289. Minimum GPA 3.00 in all MUED coursework. NOTE: Special authorization only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5189. Student Teaching Elementary. 2 Credit Hours.**

Field experience in elementary grades for graduate music education certificate students enrolled in MUED 5168. Minimum GPA 3.00 in all MUED coursework. NOTE: Special authorization only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5289. Student Teaching Secondary. 2 Credit Hours.**

Field experience in secondary grades for graduate music education certificate students. Minimum GPA 3.00 in all MUED coursework.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5389. Fieldwork in Music Therapy I. 1 to 3 Credit Hour.**

Supervised field placements where students learn how to plan and conduct music therapy sessions with different client populations.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 5489. Fieldwork in Music Therapy II. 1 to 3 Credit Hour.**

Supervised field placements where students learn how to plan and conduct music therapy sessions with different client populations.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in MUED 5389.

**MUED 5551. Percussion. 1 Credit Hour.**

Advanced methods for teaching percussion skills to students in a school setting. Topics may include but are not limited to: literature selection, various instrument performance idiosyncrasies, hand position and posture, maintenance, repair, proactive teaching and troubleshooting, methods and materials; instrument makes, accessories. Students are required to develop playing knowledge of instruments and literature.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5552. Woodwinds I. 1 Credit Hour.**

Methods for teaching woodwind skills to students in a school setting. Topics may include but are not limited to: literature selection, instrument assembly, hand position and posture, maintenance, assembling, embouchure, tone production, transposition, fingerings, range; proactive teaching and troubleshooting, methods and materials; instrument makes, and accessories. Students are required to develop a fundamental playing knowledge of instruments. NOTE: Required for all MPC majors.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5553. Upper Strings. 1 Credit Hour.**

Methods for teaching string skills to students in a school setting. Topics may include but are not limited to: literature selection, fingering and bowing patterns, shifting, vibrato, hand position and posture, maintenance, tone production, proactive teaching and troubleshooting, methods and materials; instrument makes, and accessories. Students are required to develop a fundamental playing knowledge of instruments.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5554. Lower Strings. 1 Credit Hour.**

Methods for teaching string skills to students in a school setting. Topics may include but are not limited to: literature selection, fingering and bowing patterns, shifting, vibrato, hand position and posture, maintenance, tone production, proactive teaching and troubleshooting, methods and materials; instrument makes, accessories. Students are required to develop a fundamental playing knowledge of instruments.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5555. Brass I. 1 Credit Hour.**

Methods for teaching brass skills to students in a school setting. Topics may include but are not limited to: literature selection, instrument assembly, hand position and posture, maintenance, embouchure, tone production, transposition, fingerings, range; proactive teaching and troubleshooting, methods and materials; instrument makes, accessories. Students are required to develop a fundamental playing knowledge of instruments.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5556. Brass II. 1 Credit Hour.**

Advanced methods for teaching brass skills to students in a school setting. Topics may include but are not limited to: literature selection, instrument assembly, hand position and posture, maintenance, embouchure, tone production, transposition, fingerings, range; proactive teaching and troubleshooting, methods and materials; instrument makes, accessories, and repairs. Students are required to develop a fundamental playing knowledge of instruments.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5557. Woodwinds II. 1 Credit Hour.**

Methods for teaching double reed skills to students in a school setting. Topics may include but are not limited to: literature selection, instrument assembly, hand position and posture, maintenance, embouchure, tone production, transposition, fingerings, range; proactive teaching and troubleshooting, methods and materials; instrument makes, and accessories. Students are required to develop a fundamental playing knowledge of instruments.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5558. Guitar I. 1 Credit Hour.**

Carefully sequenced developmental technical exercises designed to achieve competency with basic chord formations in all keys.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5559. Guitar II. 1 Credit Hour.**

A continuation of Music Education 5558 in which skills are further developed to include positions and more advanced folk and popular accompaniment techniques.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in MUED 5558.

**MUED 5589. Fieldwork in Music Therapy III. 1 to 3 Credit Hour.**

Supervised field placements where students plan and conduct music therapy sessions with different client populations and different settings.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in MUED 5389 and MUED 5489.

**MUED 5611. Music Therapy Graduate Overview. 3 Credit Hours.**

Advanced survey of music therapy theory and practice. Clinical case studies will be used to illustrate general principles of assessment, goal planning, treatment and evaluation.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5613. Music Therapy Foundations. 3 Credit Hours.**

Advanced survey and examination of philosophical, psychological, biological and sociological foundations for the use of music as therapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5614. Psychiatric Music Therapy. 3 Credit Hours.**

Advanced survey and examination of music therapy practice with psychiatric populations (e.g., schizophrenia, affective disorders, PTSD), with laboratory training in how to design and implement music experiences to meet therapeutic goals.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5615. Rehabilitative Music Therapy. 3 Credit Hours.**

Advanced survey of music therapy literature based on physical rehabilitation (e.g., brain injury, stroke, cerebral palsy, neuromotor disease), with laboratory training in how to design and implement music experiences to meet therapeutic goals.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5616. Developmental Music Therapy. 3 Credit Hours.**

Advanced examination of music therapy methods used with children who have developmental problems (e.g., mental retardation, learning disabilities, behavior problems, sensory disorders) with laboratory training in how to design and implement music experiences to meet therapeutic needs.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUED 5611.

**MUED 5617. Medical Music Therapy. 3 Credit Hours.**

Advanced survey of music therapy literature based on medical applications (e.g., general hospital, surgery, chronic and terminal illness), with laboratory training in how to design and implement music experiences to meet therapeutic goals.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5618. Music Therapy Ethics. 1 to 2 Credit Hour.**

Advanced survey and examination of ethical issues in music therapy practice, research, education, and supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5619. Medical/Rehabilitative Music Therapy. 3 Credit Hours.**

Advanced survey and examination of music therapy treatment in physical rehabilitation treatment (e.g., brain injury, stroke, cerebral palsy, neuromotor disease) and medical issues (surgery, diabetes, cancer, AIDS) with laboratory training in how to design and implement music experiences to meet therapeutic goals.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5631. Advanced Functional Voice I. 1 Credit Hour.**

Advanced voice development for various clinical situations utilizing standard clinical repertoire.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5632. Advanced Functional Voice II. 1 Credit Hour.**

Advanced vocal techniques for eliciting singing responses from various client populations in various clinical settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUED 5631.

**MUED 5633. Advanced Functional Piano I. 1 Credit Hour.**

Advanced skill and repertoire development for leading and accompanying vocal and instrumental activities in various music therapy settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5634. Advanced Functional Piano II. 1 Credit Hour.**

More advanced functional piano skills for accompanying music therapy sessions in various settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUED 5633.

**MUED 5635. Advanced Functional Guitar I. 1 Credit Hour.**

Advanced functional singing and accompanying skills on guitar with a focus upon music therapy song literature utilized in various settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5636. Advanced Functional Guitar II. 1 Credit Hour.**

Various advanced guitar techniques for accompaniment focusing on standard music therapy literature as utilized in various clinical settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUED 5635.

**MUED 5641. Music Therapy Experiences I: Creative Methods. 1 Credit Hour.**

Advanced survey and analysis of the therapeutic potential of creative methods in Music Therapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUED 5611.

**MUED 5642. Music Therapy Experiences II: Recreative Methods. 1 Credit Hour.**

Advanced survey and analysis of recreative methods of Music Therapy and an exploration of their therapeutic potential.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUED 5611.

**MUED 5643. Music Therapy Experiences III: Receptive Methods. 1 Credit Hour.**

Advanced survey and analysis of receptive methods of Music Therapy and an exploration of their therapeutic potential.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in MUED 5611.

**MUED 5646. Music Therapy Research. 3 Credit Hours.**

Advanced survey of music therapy research in skill development in formulating research questions, reviewing the literature, designing a study, analyzing and interpreting data, and writing reports. Ethical issues are considered.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5649. Of Sound Mind and Body: Musical and Nonmusical Strategies for Optimal Resiliency and Wellness. 1 Credit Hour.**

This course will explore how the expressive arts, and especially music, can enhance the process of becoming aware of, making choices toward, and engaging in practices that result in a resilient, healthy and fulfilling life.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUED 5650. Contemporary Problems in Music Education: Individual Study. 1 to 3 Credit Hour.**

Study of recent trends and issues in Music Education through critical examination of research and practical application of selected techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUED 5651. Performance Anxiety. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5652. Night Owls Campus/Community Band. 0 or 1 Credit Hours.**

The Night Owls Campus/Community Band is a large concert wind band that is comprised of Temple University students (majors and non-majors) and community members from the Greater Philadelphia area. No audition is required for membership. The ensemble meets one evening per week, totaling two hours of rehearsal, and performs a concert at the end of each semester. Repertory performed includes standard wind literature and crowd-pleasing favorites. Members may elect to participate for Temple University academic credit or pay a nominal fee to join as a community member (course credit is not transcribed in the latter choice). NOTE: Ability to read music is required; personally owned instrument or rental needed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUED 5653. Effective Arts Education Environments: Managing the Classroom. 3 Credit Hours.**

This course focuses on effective and efficient methods for engaging and teaching students of all ages in a variety of arts education environments (including but not limited to music, art, theater, and dance). Calling upon content knowledge and skills in arts education fields, students will be introduced to established and innovative teaching techniques that favor the advancement of student learner through shaping of the learning environment. Emphases will include current trends and research-based practices, diversity among learners, implementation of novel and efficient techniques, observation and analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5661. Teaching Students with Special Needs. 3 Credit Hours.**

For MPC graduate music education majors. Advanced exploration and analysis of the characteristics of exceptional children and the implications of these characteristics for music education. A variety of music materials especially designed or adaptable for teaching music to handicapped children discussed in terms of their practical use for classroom instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5662. Advanced Keyboard Harmony. 3 Credit Hours.**

Advanced skills development in use of the keyboard as a classroom tool. Advanced focus on chord progressions, sequences, modulations, harmonizations of small forms, transposition, extemporization, score reading.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5665. Music Learning and Development. 3 Credit Hours.**

For MPC graduate music education majors. Advanced exploration and analysis of how learners develop and how individual learners' needs affect music learning to inform teachers how to teach. Preservice music teachers study music development from the learners' perspective and begin to process ways in which music learning theories, approaches, processes, and methods can guide learners' development. NOTE: Includes field observations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.



**MUED 5667. Teaching Instrumental Music to Inclusive Populations (TIMIP). 3 Credit Hours.**

For MPC graduate music education majors. For the prospective teacher of instrumental music in the elementary and secondary schools, this advanced synthesis of all previous work in instrumental music courses will emphasize: efficient rehearsal and teaching techniques for small and large group settings; developing musical and technical skills of instrumental music students; recruiting; repertoire; programming; performance issues; evaluation; administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5668. Student Teaching Seminar. 3 Credit Hours.**

Seminar for MPC graduate music education majors enrolled in Music Education 5689 and/or Music Education 5789. NOTE: Special authorization only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5669. Teaching Choral Music to Inclusive Populations (TCMIP). 3 Credit Hours.**

For MPC graduate music education majors. Advanced exploration and analysis for the prospective teacher of vocal music; solutions for problems of audition procedures, development of musical skills within the choral rehearsal, repertoire and programming, voice classes, performance planning and execution, the changing voice, and needs of special learners.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5671. School Choral Ensembles. 2 Credit Hours.**

Preservice music teachers increase their understanding of vocal development, inclusive vocal settings, diverse music repertoire and transfer of music across in-school and out-of-school settings. Preservice music teachers consider a variety of approaches to ensemble formations (e.g.: non-select/select-implications of inclusion/exclusion; curricular/extra-curricular) and ways in which types of school ensembles (e.g.: Jazz, Show Choir, Barbershop, Gospel, Women's Chorus, Men's Chorus, Mixed Chorus) have traditionally been established and maintained. Contemporary research and practice, with implications for new types of vocal and choral ensembles in Pre-K-12 school settings, also will be considered. Emphasis is on building a course of study for choral music in schools. In-class performances and peer evaluations, and observations (in-class) required. This course is for majors only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5672. School Choral Ensembles. 2 Credit Hours.**

In this advanced course, preservice music teachers increase their understanding of vocal development, inclusive vocal settings, diverse music repertoire and transfer of music across in-school and out-of-school settings. Preservice music teachers consider a variety of approaches to ensemble formations (e.g.: non-select/select-implications of inclusion/exclusion; curricular/extra-curricular) and ways in which types of school ensembles (e.g.: Jazz, Show Choir, Barbershop, Gospel, Women's Chorus, Men's Chorus, Mixed Chorus) have traditionally been established and maintained. Contemporary research and practice, with implications for new types of vocal and choral ensembles in Pre-K-12 school settings, also will be considered. Emphasis is on building a course of study for choral music in schools. In-class performances and peer evaluations, and observations (in-class) required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5673. Jazz Education - Instrumental. 2 Credit Hours.**

For MPC graduate music education majors. Advanced survey and analysis of strategies for the development of the instrumental jazz ensemble in secondary school settings. Topics will include (but not be limited to): instrumentation, rehearsal techniques, literature, listening, improvisation, styles, rhythm, articulation, rhythm section, and programming. NOTE: Special authorization only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5674. Jazz Education - Vocal. 2 Credit Hours.**

For MPC graduate music education majors. Advanced survey and analysis of the strategies for the development of the vocal jazz ensemble in secondary school settings. Topics will include (but not be limited to): Swing and show choirs, balancing voices, rehearsal techniques, literature, listening, improvisation, styles, rhythm, articulation, rhythm section, and programming. NOTE: Special authorization only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5675. Inclusive Vocal Development: Pre-Kindergarten - Secondary. 2 Credit Hours.**

In this course, preservice music teachers learn to guide their future students through stages of vocal development. Emphases include presentation of an exemplary vocal model for one's students, voice care for choral musicians and teachers, and considerations for selecting repertoire appropriate for Pre-Kindergarten, elementary, and secondary school choral musicians. In-class performances and peer evaluations, and observations (in-class) required. This course is for majors only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5676. Audiation and Music Learning. 3 Credit Hours.**

The course covers music learning theory, music aptitude and achievement, sequential acquisition of tonal and rhythm skill and content, tonal and rhythm solfeggio, learning sequence activities, whole-part-whole organization of curriculum and teaching, and satisfies music learning theory requirements for completion of Professional Development Level 1 by the Gordon Institute for Music Learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5677. Music Learning Theory in Context: Early Childhood, Instrumental, and General Music Applications. 3 Credit Hours.**

The course covers contextual and practical application techniques for music learning theory in early childhood, instrumental and general music settings. Students will learn about informal guidance and formal instruction in music, develop musicianship and composition and improvisation skills in a variety of tonalities and meters, learn to use movement in music instructional settings, learn and teach an MLT based rote song teaching and evaluation procedure, teach learning sequence activities relevant to specific genres, peer-teach, and develop classroom activities based on MLT and audiation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUED 5678. Inclusive Vocal Development. 2 Credit Hours.**

In this advanced course, preservice music teachers learn to guide students through stages of vocal development. Emphases include presentation of an exemplary vocal model, voice care for choral musicians and teachers, and considerations for selecting repertoire appropriate for Pre-Kindergarten, elementary, and secondary school choral musicians. In-class performances and peer evaluations, and observations (in-class) required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5680. Music Therapy: Special Topics. 2 Credit Hours.**

An in-depth examination of a particular advisor-approved aspect of Music Therapy practice, research or theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 5685. Music Therapy Clinical Internship. 1 to 6 Credit Hour.**

Advanced supervision of clinical experiences in music therapy with various client populations and in various settings.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**MUED 5689. Student Teaching - Elementary. 3 Credit Hours.**

Field experience in elementary grades for MPC graduate music education majors. NOTE: Special authorization only.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**MUED 5696. Teaching General Music to Inclusive Populations (TGMIP). 3 Credit Hours.**

For MPC graduate music education majors. Advanced exploration and analysis of the principles, practices, and materials central to the general music program in elementary and secondary education. NOTE: Special authorization only. Includes Field Experience.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5712. MT Experiences II Recreative Methods. 1 Credit Hour.**

Students experience advanced recreative methods of Music Therapy and explore their therapeutic potential. NOTE: This course is for majors only.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 5789. Student Teaching - Secondary. 3 Credit Hours.**

Field experience in secondary grades for MPC graduate music education majors.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8325. Apprenticeship in Music Therapy Education and Supervision II. 1 Credit Hour.**

Faculty provide doctoral students with close supervision as they assist in the teaching and supervision of Music Therapy students.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8425. Apprenticeship in Music Therapy Education and Supervision III. 1 Credit Hour.**

Faculty provide doctoral students with close supervision as they assist in the teaching and supervision of Music Therapy students.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8525. Apprenticeship in Music Therapy Education and Supervision IV. 1 Credit Hour.**

Faculty provide doctoral students with close supervision as they assist in the teaching and supervision of Music Therapy students.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8566. Qualitative Res: Mus Ed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8601. Qualitative Research in Music Therapy. 1 to 9 Credit Hour.**

Students learn to conceive, design, and write a qualitative research study in Music Therapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8602. Quantitative Research in Music Therapy. 1 to 9 Credit Hour.**

Students learn to conceive, design, and write a quantitative research study in Music Therapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8603. Theories of Music Psychotherapy. 1 to 9 Credit Hour.**

An examination of how Music Psychotherapy is practiced within various theoretical orientations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8611. Music Therapy Research. 3 Credit Hours.**

An introduction to quantitative and qualitative research in Music Therapy, with emphasis on developing skills in reading and evaluating studies.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8612. Music Therapy Foundation. 3 Credit Hours.**

An examination of musicological, philosophical, psychological, biological, and sociological foundations for Music Therapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8613. Songs in Psychotherapy. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8614. Guided Imagery and Music I. 3 Credit Hours.**

An introduction to GIM through demonstrations, lectures, and personal experiences. Topics include the role of music, relaxation procedures, types of imagery, and basic guiding techniques.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8615. Adv Mus Thrpy Clin Trng. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8616. MT Foundations. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8617. Multicultural Music Therapy. 2 to 3 Credit Hours.**

An examination of the specific needs of multicultural clients, with training in specialized Music Therapy approaches and methods. Emphasis is given to the acquisition of skills in ethnic musical forms and multicultural empathy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8618. Music in Medicine. 1 to 9 Credit Hour.**

An examination of research and clinical practice concerning the mind-body-social-spirit relationships and the acquisition of knowledge and skill in Music Therapy approaches to promote biopsychosocial health.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8619. Music Therapy Education and Training. 1 to 2 Credit Hour.**

An introduction to accreditation and approval, curriculum planning, syllabus design, teaching, academic supervision, and the challenges presented in each of these areas of Music Therapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8621. Music Therapy Ethics. 2 Credit Hours.**

An examination of ethical issues in Music Therapy practice, research, education, and supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8622. Res Mus Psychotherapy. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8623. Research in Music Psychotherapy. 3 Credit Hours.**

For doctoral students only. A critical examination of foundational, process-oriented, and efficacy research on the use of music in psychotherapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8624. Research in Music Medicine. 3 Credit Hours.**

For doctoral students only. A critical examination of foundational and efficacy research on the use of music in medicine.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8625. Apprenticeship in Music Therapy Education and Supervision. 1 Credit Hour.**

Faculty provide doctoral students with close supervision as they assist in the teaching and supervision of Music Therapy students.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8626. Models of Clinical Supervision in Music Therapy. 2 Credit Hours.**

An in-depth examination of various models of Music Therapy supervision appropriate for pre-professional and professional clinical work, including psychodynamic, humanistic, and behavioral models. Emphasis is given to the use of Music and Music Therapy techniques as forms of supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8627. Apprentice MT Ed/Slp II. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8650. Special Topics in Music Education. 1 to 3 Credit Hour.**

This variable-credit course offers students a granular look at a number of specialized topics in music education. Its content varies. Areas of study can include, but are not limited to: administration, arts education, choral music education, early childhood, inclusion and diversity, performance development, current trends, implementing and applying research, creativity, and music industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College, Education & Human Development.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8651. Psych Music Lrn & Behav. 3 Credit Hours.**

Simple acoustic principles and the physiology of hearing lay groundwork for investigation into issues of perception, measurement, and performance of rhythm, melody, and harmony. Aural acquisition of musical information and understanding notation follow. Human propensities in preference, affect, and aesthetics are covered, as well as extra-musical objectives as an outcome of musical training.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8652. Measurement and Evaluation in Music. 3 Credit Hours.**

Measurement and evaluation appropriate to music study are reviewed. A primary focus is the development of appropriate and effective measurement tools for use in music instructional programs. The value, delivery, use, and interpretation of tests of musical behavior are examined. Technical aspects of measurement are given necessary pragmatic consideration.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8653. Learning Theory in Music. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8654. Adv Methods Instrum MUED. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8655. Quantitative Res: Mus Ed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8656. Academic Writing Skills. 3 Credit Hours.**

The focus is on honing writing skills toward the development of skills necessary for successful completion of a thesis, monograph, or dissertation. Topics include common writing flaws, identifying systematic flaws in the student's writing, improvement of sentence and paragraph composition, development of appreciation for revision, and practice in oral presentation.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8657. Create/Devel a Rock Band. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8658. Res 21st C Prac Gen Mus. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8659. Select/Rehearse Band Lit. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8660. Music Education in a New Key. 2 to 3 Credit Hours.**

As the world evolves, music educators look to improve ways in which the musical needs of students and the community are met. This course targets innovation and tradition. Students will explore contemporary thought and practice in the field as well as revisit effective and established traditions, towards the strengthening of personal and professional goals. Topics may include but are not limited to: Collaboration, Creation, Performance, Musical Responses, Community Connections, Curiosities and Inquiry, Social Interactions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8661. Research in Music Education. 3 Credit Hours.**

Study of research design, quantitative and qualitative analysis, and modern investigative techniques in Music and Music Education. Required of all candidates for the Master of Music degree majoring in Music Education. Strongly recommended for Ph.D. candidates in Music Education.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8662. Informal Music Learning. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8663. Interactive Multimedia I. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8664. Interactiv Multimedia II. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8665. Jazz Instrumental Education. 3 Credit Hours.**

Focus will be upon jazz instrumental education in jazz ensemble rehearsals and jazz composition/arranging courses. Emphasis on forming jazz combos and small jazz ensembles; devising efficient rehearsals for various instrument groupings; composing and arranging selections to meet the needs of jazz ensemble instrumentation; and experiencing and evaluating methods of learning in jazz.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8666. Qualitative Res: Mus Ed. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8667. Music and the Mind: Understanding Music Perception and Cognition. 3 Credit Hours.**

The burgeoning field of neuroscience provides the opportunity for greater understanding of human perception and cognition in many areas of learning. This course focuses on the intersection of the brain and music as revealed through current research. Topics may include (but are not limited to): emotion, memory, cognition, language, music skills development, aesthetics, and well-being.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**MUED 8668. History and Philosophy of Music Education. 3 Credit Hours.**

The purpose of this course is to synthesize diverse viewpoints regarding the history and philosophy of American music education. Students will analyze philosophical writings that have guided the decision-making of individuals and groups regarding why, what, and how music is taught in the public schools. Students will also gain facility with historical movements and educational policies as a contextual lens toward participating in future music education practices with regard to curriculum, instruction, and assessment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8670. Special Topics: Instrumental Music Education. 1 to 3 Credit Hour.**

For the creative and innovative graduate music education student. A synthesis of previous work in instrumental and vocal music courses, composition/arranging courses, and chamber rehearsals. Emphasis on forming combos and small ensembles of contemporary musical styles; devising an efficient rehearsal for various instrument groupings; developing minor instrument performance skills; composing and arranging selections to meet the needs of ensemble instrumentation; and experiencing and evaluating methods of informal learning in music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8671. Sociology of Music Education. 3 Credit Hours.**

The purpose of this course is to critically examine the interrelationship of music and society in the United States and prominent interpersonal and intergroup dynamics in music education contexts. Students will explore uses of music in school and community, music professions, and current research on the sociology of music. The goal is for students to engage with local and global social issues related to music teaching and learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8672. Supervsed Univ Music Tch. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8673. Music Tch in Higher Educ. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8674. Sem Grad Music Education. 1 to 3 Credit Hour.**

Advanced exploration of topics related to the field of music education, including but not limited to: teaching, learning, research, and creativity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8675. Choral Pedagogy Seminar. 2 to 3 Credit Hours.**

Choral music education and choral conducting majors will increase their understanding of current research and pedagogical systems that are directly related to teaching choral music to inclusive populations in a variety of settings. Students will be challenged to study various philosophical, pedagogical, and programmatic concepts as a basis for becoming a proficient rehearsal technician and choral scholar. Content varies from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8676. Seminar in Secondary School Music Teaching. 3 Credit Hours.**

Advanced study of educational practice specific to the secondary level (6-12). Seminar subject areas may include current trends in secondary education literature, formal and informal music learning, traditional and alternative ensembles, administration and leadership, classroom management, repertoire, rehearsal technique, and others.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8677. Seminar in Elementary School Music Teaching. 3 Credit Hours.**

Advanced study of educational practice specific to the elementary level (P-5). Seminar subject areas may include current trends in elementary education literature, formal and informal music learning, ensembles, musical development, diversity, classroom management, repertoire, rehearsal technique, and others.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8680. Contemporary Problems in Music Education: Individual Study. 1 to 3 Credit Hour.**

Study of recent trends and issues in Music Education through critical examination of research and practical application of selected techniques.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8690. Contemporary Problems in Music Education: Individual Study. 1 to 3 Credit Hour.**

Study of recent trends and issues in Music Education through critical examination of research and practical application of selected techniques.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 8691. Research Seminar in Music Education. 3 Credit Hours.**

Planning and execution of pre-dissertation research projects are discussed. Participants work independently and in small groups to acquire skills necessary for completion of the dissertation.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8725. Apprenticeship in Music Therapy Education and Supervision V. 1 Credit Hour.**

Faculty provide doctoral students with close supervision as they assist in the teaching and supervision of Music Therapy students.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 8825. Apprenticeship in Music Therapy Education and Supervision VI. 1 Credit Hour.**

Faculty provide doctoral students with close supervision as they assist in the teaching and supervision of Music Therapy students.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 9601. Basic Sk: Comm/Dig Media. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9611. Theory Development in Music Therapy. 3 Credit Hours.**

For doctoral students only. An examination of the nature of theory and the theorizing process in music therapy, based on a comparison of existing theories. Emphasis is given to developing a theory based on practice and/or research.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUED 9641. Music Therapy Doctoral Seminar. 1 to 3 Credit Hour.**

For doctoral students only. Seminar on examining current issues in Music Therapy theory, practice, research, education, training, and supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9642. Music Therapy Research Apprenticeship. 1 to 3 Credit Hour.**

Graduate students conduct Music Therapy research under faculty supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9643. Music Therapy Research Apprenticeship. 1 to 3 Credit Hour.**

Graduate students conduct Music Therapy research under faculty supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9660. Advanced Topics in Music Psychotherapy. 1 to 4 Credit Hour.**

An in-depth examination of practice, research, and/or theory in areas of specialization in Music Psychotherapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9670. Advanced Topics in Music Medicine. 1 to 4 Credit Hour.**

An in-depth examination of practice, research, and/or theory in areas of specialization in Music Medicine.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9680. Music Therapy: Special Topics. 1 to 9 Credit Hour.**

An in-depth examination of a particular topic in Music Therapy practice, research, or theory.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9687. Advanced Music Therapy Practicum. 1 to 3 Credit Hour.**

Individual and group supervision of initial professional clinical work in Music Therapy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9690. Music Therapy: Special Topics. 1 to 3 Credit Hour.**

An exploration of interdisciplinary topics in art, dance, music, drama and poetry therapies.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

For doctoral students in Music Education readying themselves to take the Preliminary Examinations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9995. Master's Final Project. 1 to 3 Credit Hour.**

For master's degree candidates in Music Therapy and Music Education only. Students complete the master's degree final project under faculty supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Therapy, Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9996. Master's Thesis Music Education. 1 to 3 Credit Hour.**

For master's degree candidates in Music Education only. Students complete the master's thesis under faculty supervision.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

For doctoral students in Music Education who have passed the Preliminary Examinations and who do not yet have an approved dissertation proposal.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUED 9999. Doctoral Dissertation. 1 to 6 Credit Hour.**

Registration is limited to Ph.D. candidates in Music Education. Continuous registration in the Fall and Spring semesters is required until the oral defense has been passed.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Music Studies (MUST)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MUST 5001. Diatonic Harm. Review. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5002. Chromatic Harm. Review. 2 Credit Hours.**

A review of chromatic harmony as it appears in the works of composers during the period of approximately 1650-1900. Emphasis will be placed on advanced components of analysis. Additional emphasis will be placed on form analysis including phrase structures and sonata-allegro form.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5003. Counterpoint Review. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5004. Grad Aural Theory Review. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5005. Remedial Studies in Music History. 1 to 5 Credit Hour.**

Designed as remedial study in Music History for graduate students. May be taken by undergraduate Music majors with approval of the advisor and instructor. Variable scheduling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5006. Sound Recording and Editing Techniques. 3 Credit Hours.**

This course is an intensive, semester-long course that integrates both sound recording and sound editing concepts for Master of Science students in Music Technology who do not pass the entering Diagnostic Examinations in Sound Recording and Sound Editing. The course utilizes online learning videos, self-guided learning activities, as well as recording studio and class lecture time.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5105. Remedial Studies in Jazz History. 1 to 5 Credit Hour.**

Designed as remedial study in Jazz History for graduate students. Variable scheduling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5106. Remedial Studies in Jazz Theory. 1 to 5 Credit Hour.**

Designed as remedial study in Music Jazz Theory for graduate students. Variable scheduling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5111. Seminar in Jazz History. 3 Credit Hours.**

A detailed advanced survey of issues current in the research and scholarship of Jazz History. The focus is upon the completion of an individual research project suitable for publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5115. Seminar in Jazz Arranging. 3 Credit Hours.**

An advanced survey of the current trends and traditional practices in jazz arranging with an emphasis upon theoretical and practical approaches and applications in small and large ensembles of various sizes and instrumental groupings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5212. Arranging I. 3 Credit Hours.**

A survey of the current trends and traditional practices in arranging for both jazz and non-jazz groups (vocal and instrumental) with an emphasis upon theoretical and practical approaches and applications in small and large ensembles of various sizes and instrumental groupings. Since students will have performed already in numerous small and large ensembles, this course will provide the opportunity for understanding how those varied experiences worked were conceived, evolved, and implemented. Assignments will vary according to sizes and types of groups.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5213. Arranging II. 3 Credit Hours.**

An advanced survey of the current trends and traditional practices in arranging for both jazz and non-jazz groups (vocal and instrumental) with an emphasis upon advanced theoretical and practical approaches and applications in small and large ensembles of various sizes and instrumental groupings. Students will have performed in numerous small and large ensembles. This course will provide the opportunity for understanding how those varied experiences worked musically. Assignments will vary according to sizes and types of groups.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUST 5212.

**MUST 5214. Orchestration. 3 Credit Hours.**

Students will explore varied instrumental characteristics and encounter scoring problems for both jazz and non-jazz ensembles including sectional, ensemble, small and large bands, and orchestral scoring. Laboratory work possible in connection with various rehearsal ensembles, bands, and orchestra. Assignments will vary according to sizes and types of groups.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5701. Research in Music. 3 Credit Hours.**

Survey of primary reference tools, monumental editions and collected works, periodicals, histories, theoretical treatises, iconography, organology, and other bibliographic materials. Term paper written under supervision.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5704. Music in History. 3 Credit Hours.**

Advanced survey of the music of the Classic and Romantic periods and the 20th century.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5705. Music in History. 3 Credit Hours.**

Advanced survey of the history, style, and musical forms from antiquity through the Renaissance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5706. Live Recording and Mixing for Broadcast. 3 Credit Hours.**

This course explores fundamental planning and procedures for capturing live music for video broadcast. Topics include planning, staging, preparation and execution of a live performance recording, followed by procedures for effective and cohesive mixing for broadcast. We will initiate and complete a typical "real world" music performance broadcast delivery project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MUST 4713 or MUST 5729) and (MUST 4714 or MUST 5714)

**MUST 5707. Computer Programming for Musicians. 3 Credit Hours.**

This course is an introduction to computer programming specifically designed to enable making music with a computer. Through a combination of creative activities and projects using the Python programming language, one of the most common languages used today for making music with computers, students learn foundational pedagogical concepts of computer programming and computational thinking, all within a musical context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5713. Canon and Fugue. 3 Credit Hours.**

The development of technique in imitative style and an ability to construct phrase and sectional forms in canonic and fugal style.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5714. Sound Editing. 3 Credit Hours.**

A course in digital audio editing that applies principles and techniques learned in Sound Recording. Students work with ProTools software and complete a series of projects to develop listening and editing skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5716. Composing Music for Films. 3 Credit Hours.**

Students use MIDI equipment and software to compose music for synchronization to film and video. Vocabulary and technology of film production and an understanding of the function of music in documentary and experimental film and video are taught. Includes lab component to develop sequencing skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5719. MIDI. 3 Credit Hours.**

An introduction to advanced use of MIDI technology, including basic synthesis, sound design, sequencing, and sampling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5720. New Music Seminar. 2 Credit Hours.**

Seminar in the use of electronic devices such as cellphones, tablets, and laptop computers for music creation and performance. For students enrolled in the 4+1 option in Music Technology.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Technology.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Bachelor of Science, Master of Science.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5721. Computer Music Studio. 3 Credit Hours.**

Extensive, independent compositional activity with computer synthesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5724. Printing Musical Scores and Parts. 3 Credit Hours.**

This course is for music students, particularly composers, who wish to become proficient with music engraving software. At the conclusion of the course, a student should be able to create scores and parts that conform to prevailing professional standards for music engraving. Course topics include a brief history of musical notation, historical methods of music printing, computer concepts such as scalable fonts and PostScript, score layout, and formatting conventions. In addition to periodic assignments, the course requires a written mid-term examination and a final project. Additional projects required for graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5725. Computers in Music Applications. 3 Credit Hours.**

Advanced theory and practice of digital synthesis of musical sound. Sampling theory, additive synthesis, and modulation synthesis are examined using models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.



**MUST 5726. Computer Synthesis. 3 Credit Hours.**

Certain musical applications of digital computers, including digital recording, digital sound synthesis, speech synthesis, and various real-time applications. The Csound and PureData applications are used throughout.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5728. Advanced Audio Production. 3 Credit Hours.**

Advanced Audio Production will focus on advanced skills of audio production, based on skills learned in Sound Editing (MUST 4714). Work will be done on the most common Digital Audio Workstation, Pro Tools, but is applicable to all DAWs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5729. Sound Recording. 3 Credit Hours.**

A course in concert hall recording of live music including topics such as room acoustics, electrical signals, microphones, recording decks and editing systems. A quantitative approach to theory will be balanced by practical laboratory instruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5730. Electronic Music Ensemble. 1 Credit Hour.**

An opportunity to perform electro-acoustic and digital music using laptops, tablets, various sensors, controllers, synths and multi-channel speakers. Members act as performers, researchers, composers and software developers.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5732. Programming in Max. 3 Credit Hours.**

This course will use the visual programming language Max to explore and implement various topics in electro-acoustic music and digital media. Topics covered will include digital sound synthesis (additive, subtractive and modulation synthesis), signal processing and sequencing. Students will learn mathematical and programming techniques for expressive digital audio signal processing and software design. Topics covered will include spectral audio programming, algorithmic synthesis, compiling, MIDI, OSC, mobile applications, live processing, and software architecture. Students will create their own interactive programs and algorithms modeled after course concepts and use these to compose a series of "etudes". Additionally, a working history of electronic music will complement course topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5733. Music Mixing in Pro Tools. 3 Credit Hours.**

This course explores fundamental planning and procedures for creating a functional and sharable music mixing session in Pro Tools. Pro Tools basic structure, importing audio, mixing basics, and final mix delivery are covered. A new song or music project will be introduced with each class, with a mix delivery due prior to the next week's class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MUST 4713 or MUST 5729) and (MUST 4714 or MUST 5714)

**MUST 5740. Seminar in Composition. 3 Credit Hours.**

Guidance toward realization of individual creative concepts in music and critical evaluation of the results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5741. Analytical Techniques. 3 Credit Hours.**

This course develops techniques for the analysis and understanding of music's expressive structure. Its primary goal is to develop greater comprehension of frequently encountered compositional forms and devices as found in great works of literature. A second goal is to provide a basic introduction to some of the current methods of theoretical analysis of music (which will probably be new or less familiar to most students). A third goal is to relate analysis to performance; in other words, how can analysis lead to a more informed performance? The course is divided into eight parts of primarily 2-week sections—I: Contrapuntal Procedures; II: Harmonic Forms; III: Schenkerian Analysis; IV: Rhythm, Meter, and Hypermeter; V: Hermeneutic Approaches; VI. Twentieth-Century Techniques and Jazz; VII. Set Theory and Twelve-Tone Theory; VIII. Grand Finale.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5742. Seminar in Theoretical Analysis. 3 Credit Hours.**

Investigation of theoretical and analytical problems in music, including theories of Heinrich Schenker and others as pertinent to particular faculty concerns.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5743. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5744. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5745. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5746. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5749. Current Topics in Musicology and Theory. 3 Credit Hours.**

A detailed survey of issues driving current research in musicology and music theory. A required foundation course for graduate students in musicology/theory, Current Topics is also open to other graduate students with an interest in these disciplines. Although the course begins with a brief history of these two disciplines, the emphasis for most of the semester is on the various methodologies and issues now in circulation. The conclusion of the course focuses on individual research projects, where students begin an intense study of an area of interest to them. This study culminates in the writing of a proposal, suitable to form the basis of a thesis paper or publishable research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5750. Special Topics in Music Technology. 3 Credit Hours.**

Advanced focus on one or more topics related to the field of Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5754. Music in the Classical Period. 3 Credit Hours.**

Examination of stylistic trends and representative works of pre-classic composers; detailed study of Haydn and Mozart.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5755. Music in the Romantic Period. 3 Credit Hours.**

An examination of music from the first half of the 19th century in the context of new social conditions, literary Romanticism, bourgeois audiences, and the changing role of the artist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5756. Music in the Twentieth Century 1900-1945. 3 Credit Hours.**

An examination of stylistic trends in vocal and instrumental music composed from 1900 through World War II.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5760. Special Topics in Music Technology. 3 Credit Hours.**

Advanced focus on one or more topics related to the field of Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 5762. Music Technology. 3 Credit Hours.**

Advanced exploration of hardware and software that can be used to create, teach, and interact with music. Provides systematic, hands-on applications of computer hardware and software to music-specific activities and tasks, including audio editing, music notation, and multimedia presentations. The Final Project demonstrates the student's ability to create and store on CD-ROM and/or DVD a complete musical project using a variety of file formats, and audio and video production software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5763. Analog and Modular Sound Synthesis. 3 Credit Hours.**

This class examines the history and techniques of making music with analog and modular synthesizers. Students gain sound sculpting and composition skills using several analog and modular synthesizers. Skills include learning how the modules in an analog synthesizer work and can be linked together and into a larger system to produce a vast palette of timbres. Students also develop an ability to recognize different analog synthesis techniques by ear, and compose several short pieces of music using sounds they create. Students acquire an understanding of how analog synthesizers are used in and have shaped many musical genres.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5764. Scoring for Film and Digital Media. 3 Credit Hours.**

Students will learn the aesthetics, terminology, procedures, and technical aspects of scoring for the visual medium. They will develop an understanding of the software used to synchronize original music to film and video, including MIDI, sample libraries, and sequencing. Students will complete projects that focus on a broad range of techniques, such as spotting, click tracks, understanding dramatic narrative, and scoring under dialogue. Further understanding of scoring techniques will occur through analysis of significant examples from the film music literature. Students will gain a fundamental understanding of the film industry, including how to identify and secure opportunities for scoring, the basics of how to approach the logistics of a feature-length film, budgeting, and the personnel involved in projects large and small. The role of music in other visual media, such as video games, theatrical production, and interactive media, will be briefly explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5765. Scoring and Audio Design for Video Games. 3 Credit Hours.**

Students gain a basic understanding of composing interactive music and designing audio for video games. Students will become proficient in the software involved in this process, including a DAW, middleware, and game distribution. The vocabulary and technology of audio production are taught, as well as an understanding of the function of music in interactive media. The business skills necessary to enter and develop a successful career in game audio will be explored. The course contains a laboratory component in which students develop sequencing skills and work with synchronized animation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5773. Digital Signal Processing for Music. 3 Credit Hours.**

An investigation of Digital Signal Processing for Music. This course employs lectures, demonstrations, and interactive software to enable students to understand the ways sound is represented by digital signals, and how to transform those signals through mathematical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5774. Hearing Music: Acoustics and Psychoacoustics of Music. 3 Credit Hours.**

A seminar on the psychoacoustics of music, based partly on Perry Cook's collection of essays: "Music, Cognition and Computerized Sound." This course employs lectures and demonstrations to enable students to understand the physics of sound and the perceptual characteristics of the Human Auditory System. Taken together, acoustics and psychoacoustics provide the student with an understanding of why music has the qualities it has, and how sound makers can utilize that knowledge to be more successful in their chosen fields.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5775. Seminar in Audio Software Design. 4 Credit Hours.**

Students will learn advanced mathematical and programming techniques for digital audio signal processing and software design. Topics covered will include spectral audio programming, algorithmic synthesis, compiling, MIDI, OSC, mobile applications, live processing, and software architecture.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Technology.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Bachelor of Science, Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 5776. Seminar in Physical Computing and Electronic Instrument Design. 4 Credit Hours.**

Students will learn the advanced concepts needed for physical computing and electronic instrument design, including basic circuitry and programming. Topics covered will include direct digital synthesis, audio input and output, MIDI, sensors, microcontrollers, and real-time control.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Technology.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Bachelor of Science, Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8100. Jazz Ensemble. 1 Credit Hour.**

Weekly rehearsals of variously-sized groups culminating in an end of semester performance. Advanced course material from the standard jazz canon and new compositions.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Jazz Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8104. Jazz Major. 3 Credit Hours.**

Private lessons for graduate jazz studies majors, instrumental, vocal, composition or arranging. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Jazz Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8110. Jazz Ensemble II. 1 Credit Hour.**

Weekly rehearsals culminating in an end of semester performance. Course material from the standard jazz canon and new compositions.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Jazz Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8111. Seminar in Jazz History. 3 Credit Hours.**

A detailed advanced survey of issues current in the research and scholarship of Jazz History. The focus is upon the completion of an individual research project suitable for publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8112. Seminar in Jazz Improvisation. 3 Credit Hours.**

An advanced survey of the current trends and traditional practices in jazz improvisation with an emphasis upon theoretical approaches and applications in small ensembles of various sizes and instrumental groupings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8113. Seminar in Jazz Composition. 3 Credit Hours.**

An advanced survey of the current trends and traditional practices in jazz composition with an emphasis upon theoretical and practical approaches and applications in small ensembles of various sizes and instrumental groupings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8114. Jazz Major. 3 Credit Hours.**

Private lessons for graduate jazz studies majors, instrumental, vocal, composition or arranging. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Jazz Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8115. Seminar in Jazz Arranging. 3 Credit Hours.**

An advanced survey of the current trends and traditional practices in jazz arranging with an emphasis upon theoretical and practical approaches and applications in small and large ensembles of various sizes and instrumental groupings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8120. Special Topics in Jazz History. 1 to 3 Credit Hour.**

Advanced focus upon the work of a jazz artist or composer or a particular style or period culminating in a paper suitable for publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8124. Jazz Major. 3 Credit Hours.**

Private lessons for graduate jazz studies majors, instrumental, vocal, composition or arranging. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Jazz Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8130. Special Topics in Jazz Theory. 1 to 3 Credit Hour.**

Advanced theoretical analysis of the work of a composer or a stylistic period culminating in a paper suitable for publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8140. Special Topics in Jazz Improvisation. 1 to 3 Credit Hour.**

Advanced concepts of jazz improvisation for use in small ensembles of various sizes and instrumental groupings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8150. Special Topics in Jazz Composition. 1 to 3 Credit Hour.**

Advanced focus upon the development of a portfolio of jazz compositions suitable for publication.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8160. Special Topics in Jazz Pedagogy. 1 to 3 Credit Hour.**

Advanced analysis and application of current techniques and practices in jazz pedagogy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8170. Special Topics in the Business of Music. 1 to 3 Credit Hour.**

Advanced business and entrepreneurship strategies for music performers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8180. Special Topics in Music. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8184. Jazz Major (Recital). 3 Credit Hours.**

Private lessons for graduate jazz studies majors, instrumental, vocal, composition or arranging. One-hour lesson each week. Culminates in full recital during final year of study. Students are required to perform or teach private lessons outside the university, subject to availability and/or scheduling conflicts with other Boyer courses or obligations.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Jazz Studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8220. Special Topics in Jazz Voice. 2 to 3 Credit Hours.**

Advanced concepts in jazz vocal practice for use in both large and small ensembles of various sizes and instrumental groupings. Course material will be from both the standard and jazz repertoires.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8230. Special Topics in the American Songbook. 2 to 3 Credit Hours.**

Advanced concepts in vocal practice for use in both large and small ensembles of various sizes and instrumental groupings. Course material will focus exclusively upon standard repertoire.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8480. Special Topics in Music. 1 to 3 Credit Hour.**

Special authorization required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8602. Intro to Ethnomusicology. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8700. Latin American Ensemble. 0 to 1 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8701. Research in Music. 3 Credit Hours.**

Survey of primary reference tools, monumental editions and collected works, periodicals, histories, theoretical treatises, iconography, organology, and other bibliographic materials. Term paper written under supervision.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8702. Introduction to Ethnomusicology. 2 to 3 Credit Hours.**

An overview of the history of ethnomusicology rather than an introduction to the specific musical practices of various countries. Focuses on the origins of the discipline at the turn of the 20th century, various interests of ethnomusicologists over the years, and internal debates within the field about their relative importance. Attention is given to anthropology and cultural studies on ethnomusicology since the 1970s and its growing interdisciplinary orientation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8703. Studies in Ethnomusicology. 3 Credit Hours.**

Seminar focusing on issues prominent in present-day ethnomusicological research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8704. Music in History. 3 Credit Hours.**

Advanced survey of the music of the Classic and Romantic periods and music of the 20th century.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8705. Music in History. 3 Credit Hours.**

Advanced survey of the history, style, and musical forms from antiquity through the Renaissance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.



**MUST 8706. Live Recording and Mixing for Broadcast. 3 Credit Hours.**

This course explores fundamental planning and procedures for capturing live music for video broadcast. Topics include planning, staging, preparation and execution of a live performance recording, followed by procedures for effective and cohesive mixing for broadcast. We will initiate and complete a typical "real world" music performance broadcast delivery project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MUST 4713, MUST 5729, or MUST 8729) and (MUST 4714, MUST 5714, or MUST 8712)

**MUST 8707. Computer Programming for Musicians. 3 Credit Hours.**

This course is an introduction to computer programming specifically designed to enable making music with a computer. Through a combination of creative activities and projects using the Python programming language, one of the most common languages used today for making music with computers, students learn foundational pedagogical concepts of computer programming and computational thinking, all within a musical context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8708. History of Opera. 2 to 3 Credit Hours.**

A history of opera from 1600-1790. An expanded paper and/or project is assigned for students seeking 3 credits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8709. History of Opera. 2 to 3 Credit Hours.**

A continuation of MUSIC STUDIES 8708. An expanded paper and/or project is assigned for students seeking 3 credits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8710. Early Music Ensemble. 1 Credit Hour.**

An opportunity to perform music from medieval through preclassic times. Reproduction of original instruments, principles of performance practice in original form and as they emerge through modern efforts at reconstruction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8712. Sound Editing. 3 Credit Hours.**

A course in digital audio editing that applies principles and techniques learned in Sound Recording. Students work with ProTools software and complete a series of projects to develop listening and editing skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8713. Canon and Fugue. 3 Credit Hours.**

The development of technique in imitative style and an ability to construct phrase and sectional forms in canonic and fugal style.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8714. Contemporary Music. 3 Credit Hours.**

Late 19th- through 20th-century compositional theories and practices. Includes labs and practicums.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8715. Composition I. 1 to 2 Credit Hour.**

Original composition. Development of inventive ability through compositional modeling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8716. Composing Music for Films. 3 Credit Hours.**

Students use MIDI equipment and software to compose music for synchronization to film and video. Vocabulary and technology of film production and an understanding of the function of music in documentary and experimental film and video are taught. Includes lab component to develop sequencing skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8717. Composition II. 1 to 2 Credit Hour.**

Original composition. Development of inventive ability through performance in a compositional laboratory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8719. MIDI. 3 Credit Hours.**

An introduction to the use of MIDI technology, including basic synthesis, sound design, sequencing, and sampling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8720. New Music Seminar. 2 Credit Hours.**

Seminar in the use of electronic devices such as cellphones, tablets, and laptop computers for music creation and performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8721. Computer Music Studio. 3 Credit Hours.**

Extensive, independent compositional activity with computer synthesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8722. Scoring for Film and Digital Media. 3 Credit Hours.**

Students will learn the aesthetics, terminology, procedures, and technical aspects of scoring for the visual medium. They will develop an understanding of the software used to synchronize original music to film and video, including MIDI, sample libraries, and sequencing. Students will complete projects that focus on a broad range of techniques, such as spotting, click tracks, understanding dramatic narrative, and scoring under dialogue. Further understanding of scoring techniques will occur through analysis of significant examples from the film music literature. Students will gain a fundamental understanding of the film industry, including how to identify and secure opportunities for scoring, the basics of how to approach the logistics of a feature-length film, budgeting, and the personnel involved in projects large and small. The role of music in other visual media, such as video games, theatrical production, and interactive media, will be briefly explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8724. Printing Musical Scores and Parts. 3 Credit Hours.**

This is course for music students, particularly composers, who wish to become proficient with music engraving software. At the conclusion of the course, a student should be able to create scores and parts that conform to prevailing professional standards for music engraving. Course topics include a brief history of musical notation, historical methods of music printing, computer concepts such as scalable fonts and PostScript, score layout, and formatting conventions. In addition to periodic assignments, the course requires a written mid-term examination and a final project. Additional projects required for graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8725. Computers in Mus Applications. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8726. Computer Synthesis. 3 Credit Hours.**

Certain musical applications of digital computers, including digital recording, digital sound synthesis, speech synthesis, and various real-time applications. The Csound and PureData applications are used throughout.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8727. Electronic Music Composition: Practice, History, Theory. 3 Credit Hours.**

The history of electro-acoustic music, which is essential to music in the 20th century. Composers who wrote for electronic instruments include Edgard Varèse, Olivier Messaien and Paul Hindemith, the "musique concrète" school (Pierre Schaeffer, Pierre Henry, Edgard Varèse, etc.), Karlheinz Stockhausen, Gyorgi Ligeti, Luciano Berio, Milton Babbitt, John Cage, Iannis Xenakis, and Mario Davidovsky. These composers used unique and varied technologies in their music. New technologies soon crossed over into pop music, and now dominate commercial music and film. A dialogue between composers and engineers is now crucial in order to make all aspects of sound available to composers. This is available to composers, theorists, historians, and instrumentalists, who must master the extended techniques that are now an essential part of new music performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8728. Advanced Audio Production. 3 Credit Hours.**

Advanced Audio Production will focus on advanced skills of audio production. Work will be done on the most common Digital Audio Workstation, Pro Tools, but is applicable to all DAWs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8729. Sound Recording. 3 Credit Hours.**

A course in concert hall recording of live music including topics such as room acoustics, electrical signals, microphones, recording decks and editing systems. A quantitative approach to theory will be balanced by practical laboratory instruction. NOTE: The course is required for students who have elected the Music Technology Component.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8730. Electronic Music Ensemble. 1 Credit Hour.**

An opportunity to perform electro-acoustic and digital music using laptops, tablets, various sensors, controllers, synths and multi-channel speakers. Members act as performers, researchers, composers and software developers.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8731. The Pedagogy of Music Theory. 3 Credit Hours.**

This course covers the methodologies for teaching both written and aural music theory. Course work includes a survey of current and past textbooks in music theory. In addition, the course covers how to create a syllabus, how to write a lesson plan, how to manage class time, and how to deal with different learning styles among students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8732. Programming in Max. 3 Credit Hours.**

This course will use the visual programming language Max to explore and implement various topics in electro-acoustic music and digital media. Topics covered will include digital sound synthesis (additive, subtractive and modulation synthesis), signal processing and sequencing. Students will learn mathematical and programming techniques for expressive digital audio signal processing and software design. Topics covered will include spectral audio programming, algorithmic synthesis, compiling, MIDI, OSC, mobile applications, live processing, and software architecture. Students will create their own interactive programs and algorithms modeled after course concepts and use these to compose a series of "etudes". Additionally, a working history of electronic music will complement course topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8733. Music Mixing in Pro Tools. 3 Credit Hours.**

This course explores fundamental planning and procedures for creating a functional and sharable music mixing session in Pro Tools. Pro Tools basic structure, importing audio, mixing basics, and final mix delivery are covered. A new song or music project will be introduced with each class, with a mix delivery due prior to the next week's class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MUST 4713, MUST 5729, or MUST 8729) and (MUST 4714, MUST 5714, or MUST 8712)

**MUST 8737. History and Pedagogy of Musicology. 3 Credit Hours.**

History and Pedagogy of Musicology studies the major figures and methodologies in the history of musicology. In addition, the course examines the growing field of pedagogical methods in play for teaching music history for both non-music majors and music majors at the undergraduate level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUST 8701.

**MUST 8738. Schenkerian Analysis 1. 3 Credit Hours.**

This course is an introduction to the theories of Heinrich Schenker. The course will begin with a review of harmony (Stufen theory) and counterpoint (Species) as conceived by Schenker. The primary concern of the course, however, is to learn how to create Schenkerian analyses, starting with analysis at the level of the musical phrase and culminating in the analysis of a sonata form. Weekly assignments will include analyses of excerpts drawn from 18th- and 19th-century music

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8739. Schenkerian Analysis 2. 3 Credit Hours.**

This course continues the study of Schenkerian Analysis first through study of his three major works: Schenker's Harmony text, his Counterpoint text, and his Free Composition. The course also includes analysis of longer forms, chromatic music, and extensions of his theory in rhythmic analysis, and music after 1900.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUST 8738.

**MUST 8740. Seminar in Composition. 3 Credit Hours.**

Enrollment limited to composition majors. For students enrolled in M.M. and D.M.A. programs in Composition. Guidance toward realization of individual creative concepts in music and critical evaluation of the results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8741. Analytical Techniques. 3 Credit Hours.**

This course develops techniques for the analysis and understanding of music's expressive structure. Its primary goal is to develop greater comprehension of frequently encountered compositional forms and devices as found in great works of literature. A second goal is to provide a basic introduction to some of the current methods of theoretical analysis of music (which will probably be new or less familiar to most students). A third goal is to relate analysis to performance; in other words, how can analysis lead to a more informed performance? The course is divided into eight parts of primarily 2-week sections—I: Contrapuntal Procedures; II: Harmonic Forms; III: Schenkerian Analysis; IV: Rhythm, Meter, and Hypermeter; V: Hermeneutic Approaches; VI. Twentieth-Century Techniques and Jazz; VII. Set Theory and Twelve-Tone Theory; VIII. Grand Finale.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8742. Seminar in Theoretical Analysis. 3 Credit Hours.**

Investigation of theoretical and analytical problems in music, including theories of Heinrich Schenker and others as pertinent to particular faculty concerns.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8743. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8744. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8745. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8746. Seminar in Stylistic Analysis. 3 Credit Hours.**

Advanced study of compositional techniques, composers, analytical techniques, and/or genres. Seminar subject areas may include Bartok's theory and practice, Stravinsky's Russian Period, Analytical Techniques, Lied, Analysis of Opera, Mozart's Piano Concerti, Music of Debussy and Messaien, current trends in analysis, American Neo-classicism, serialists, and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8747. Aesthetics of Music. 3 Credit Hours.**

Aesthetic principles as applied to music. Problems in making value judgments. Historical survey of aesthetic theories. Individual investigation of topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8748. Seminar in Post-Tonal Theory. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8749. Current Topics in Musicology and Theory. 3 Credit Hours.**

A detailed survey of issues driving current research in musicology and music theory. A required foundation-course for graduate students in musicology/theory, Current Topics is also open to other graduate students with an interest in these disciplines. Although the course begins with a brief history of these two disciplines, the emphasis for most of the semester is on the various methodologies and issues now in circulation. The conclusion of the course focuses on individual research projects, where students begin an intense study of an area of interest to them. This study culminates in the writing of a proposal, suitable to form the basis of a thesis paper or publishable research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8750. Special Topics in Music Technology. 3 Credit Hours.**

Advanced focus on one or more topics related to the field of Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8751. Singing on Record. 2 to 3 Credit Hours.**

A survey of the most notable recorded vocal performances. Emphasis is on vocal categories, repertoire, the operatic career, changing vocal styles, performance traditions, and vocal practices throughout the decades.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8752. Studies in Renaissance Music. 3 Credit Hours.**

Selected topics from sacred and secular polyphony and early instrumental music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8753. Music in the Baroque Era: Seventeenth Century. 3 Credit Hours.**

A study of the major stylistic development in the instrumental and vocal music from 1600 to 1700.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8754. Music in the Classical Period. 3 Credit Hours.**

Examination of stylistic trends and representative works of pre-classic composers; detailed study of Haydn and Mozart.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8755. Music in the Romantic Period I. 3 Credit Hours.**

An examination of music from the first half of the 19th century in the context of new social conditions, literary Romanticism, bourgeois audiences, and the changing role of the artist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8756. Music in the 20th Century: 1900-1945. 3 Credit Hours.**

An examination of stylistic trends in vocal and instrumental music composed from 1900 through World War II.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8757. Music of the Late Baroque. 3 Credit Hours.**

Study of selected works: Vivaldi, Rameau, Bach, Handel, and other composers of the late Baroque period.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8758. Sons of J.S. Bach. 3 Credit Hours.**

Seminar on music composed by several sons of J.S. Bach: Carl Philipp Emanuel, Johann Christian, and Wilhelm Friedemann.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8759. Trad/Pop Mus of Latin Am. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8760. Special Topics in Music Technology. 3 Credit Hours.**

Advanced focus on one or more topics related to the field of Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8761. Nineteenth-Century Program Music. 3 Credit Hours.**

A study of the development of instrumental program music in the 19th century. Readings, analysis and individual research are required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8762. Introduction to Music Technology for Non-Majors. 3 Credit Hours.**

Introduction to the ways in which computer software and hardware can be used to create, edit, and produce audio, music, and multimedia files. Various music styles and genres, such as hip hop, house, techno, ambient, drum and bass, EDM, experimental, and trap, will be explored through lectures, demonstrations, and hands-on individual and group projects. Additional topics will include working with loops, mixing audio, and the differences between various file formats. A final project is required that demonstrates the student's ability to create a complete musical project using a variety of audio software and file formats. The course is open to all students at Temple with the exception of Music Technology majors. A basic knowledge of music notation and the ability to read music are strongly recommended, though not required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8763. Studies in Performance Practice. 3 Credit Hours.**

An exploration of major issues surrounding the performance of instrumental and vocal music from 1600 to the early 20th century. Through the study of historical treatises and tutors, modern secondary literature, recordings, and the music itself, this seminar seeks to broaden the range of performance options available to contemporary performers interested in creating historically informed interpretations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8764. Studies in Performance Practice. 3 Credit Hours.**

A continuation of Studies in Performance Practice 8763.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8765. Late Nineteenth-Century Russian Music. 3 Credit Hours.**

The Russian, Post-Wagnerian tradition in the music of Tchaikovsky and Rachmaninoff. Genres include symphony, concerto, song, and piano music.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8766. Music of the Caribbean. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.



**MUST 8767. Nineteenth Century Piano Music. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8768. Renaissance Performance Practice. 3 Credit Hours.**

Problems confronting performers of both vocal and instrumental music (ca. 1450-1600): improvisation and ornamentation, modal theory, and music ficta.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8769. Verdi Seminar. 3 Credit Hours.**

A chronological survey of the major works of Verdi, focusing on changing styles and performance practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8771. Post-Tonal Theory II. 3 Credit Hours.**

This course extends the studies begun in Post-Tonal Theory through readings and analysis. It is organized into 3-week sessions: 1. Explorations of Atonal Theory; 2. Explorations in Transformational Theory; 3. Explorations in Twelve-Tone Theory; 4. Explorations in Rhythm. The course concludes with student presentations and a final scholarly paper.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in MUST 8748.

**MUST 8773. Digital Signal Processing for Music. 3 Credit Hours.**

An investigation of Digital Signal Processing for Music. This course employs lectures, demonstrations, and interactive software to enable students to understand the ways sound is represented by digital signals, and how to transform those signals through mathematical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8774. Hearing Music: Acoustics and Psychoacoustics of Music. 3 Credit Hours.**

A seminar on the psychoacoustics of music, based partly on Perry Cook's collection of essays: "Music, Cognition and Computerized Sound." This course employs lectures and demonstrations to enable students to understand the physics of sound and the perceptual characteristics of the Human Auditory System. Taken together, acoustics and psychoacoustics provide the student with an understanding of why music has the qualities it has, and how sound makers can utilize that knowledge to be more successful in their chosen fields.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8775. Seminar in Audio Software Design. 4 Credit Hours.**

Students will learn advanced mathematical and programming techniques for digital audio signal processing and software design. Topics covered will include spectral audio programming, algorithmic synthesis, compiling, MIDI, OSC, mobile applications, live processing, and software architecture.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8776. Seminar in Physical Computing and Electronic Instrument Design. 4 Credit Hours.**

Students will learn the advanced concepts needed for physical computing and electronic instrument design, including basic circuitry and programming. Topics covered will include direct digital synthesis, audio input and output, MIDI, sensors, microcontrollers, and real-time control.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8777. American Popular Music. 3 Credit Hours.**

Advanced exploration of the roots and transitions of American popular music in the 20th and early 21st centuries. Particular focus upon: cultural, political, and economic contexts; various artists, recordings, and styles; identity with regard to music (e.g. class, gender, race, ethnicity, etc.); and how popular music embodies, and even affects, these cultural tendencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 8778. Scoring and Audio Design for Video Games. 3 Credit Hours.**

Students gain an understanding of composing interactive music and designing audio for video games. Students will become proficient in the software involved in this process, including a DAW, middleware, and game distribution. The vocabulary and technology of audio production are taught, as well as an understanding of the function of music in interactive media. The business skills necessary to enter and develop a successful career in game audio will be explored. The course contains a laboratory component in which students develop sequencing skills and work with synchronized animation.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8779. Romantic Performance Practice: The Schumanns, Chopin, and Brahms. 3 Credit Hours.**

This seminar will focus on historically aware interpretations of keyboard, vocal, and chamber music by the Schumanns, Chopin, and Brahms. Special attention will be paid to the roles of improvisation, dance, and earlier instruments, along with questions of tempo, articulation, and rubato. Assignments will include reading, listening, and class performance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 8783. Analog and Modular Sound Synthesis. 3 Credit Hours.**

This hands-on class examines techniques of making music with analog and modular/semi-modular synthesizers within a historical framework. Students will first be introduced to the personalities and machines behind early electronic music. Historical and contemporary techniques of sound synthesis, patch creation/documentation and modulation will be discussed and employed using a variety of hardware and software synthesizers with an emphasis on in-house hardware. Students will record and upload clips to a sample catalog that they will use as a basis for compositional studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 9182. Independent Study. 1 to 3 Credit Hour.**

Special authorization required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 9282. Independent Study. 1 to 3 Credit Hour.**

Special authorization required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 9701. Doctoral Seminar Analysis, Interpretation, and Performance. 3 Credit Hours.**

For doctoral students only; master's with permission. An inquiry in broad context and across media into some fundamental issues of performance. Analysis, readings, discussions, performance, and critique.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may not be repeated for additional credits.

**MUST 9702. Doctoral Seminar in Music Studies: Music Theory. 3 Credit Hours.**

This course is a directed-research course focused on a sub-topic in the field of music theory. The course includes intensive reading and writing about that sub-topic. The course includes discussions about how to develop a working thesis (proposal), how to write an abstract, how to write a lecture, and how to develop that lecture into a seminar paper and into a publishable article.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in MUST 8701.

**MUST 9703. Doctoral Seminar in Music Studies: Music History. 3 Credit Hours.**

This course is a directed-research course focused on a sub-topic in the field of music history. The course includes intensive reading and writing about that sub-topic. The course includes discussions about how to develop a working thesis (proposal), how to write an abstract, how to write a lecture, and how to develop that lecture into a seminar paper and into a publishable article.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in MUST 8701.

**MUST 9704. Doctoral Seminar in Music Studies: Music Composition. 3 Credit Hours.**

This course is a directed-research course focused on a sub-topic in the field of music composition. The course includes intensive reading and writing about that sub-topic. The course includes discussions about how to develop a working thesis (proposal), how to write an abstract, how to write a lecture, and how to develop that lecture into a seminar paper and into a publishable article.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in MUST 8701.

**MUST 9994. Preliminary Exam Preparation. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 9995. Final Project: Music Technology. 1 to 3 Credit Hour.**

Under departmental approval and faculty supervision, the student will design and implement a substantial project in music technology. The project will include a written paper with supporting documentation and appropriate bibliographic references that explain the project in detail. The project and paper will require that the student demonstrate an ability to integrate and synthesize advanced technological knowledge and skills in the conceptualization and creation of the final outcome, such as a piece of software, hardware, media project, or multimedia product. Students projects will be showcased and discussed by each student as a capstone event, open to the public.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 9996. Final Written Project: Music Theory. 1 Credit Hour.**

A minimum of one semester is required of all M.M. candidates in the Music Theory program

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Music Theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Repeatability:** This course may be repeated for additional credit.

**MUST 9999. Dissertation/Monograph Research. 1 to 6 Credit Hour.**

Dissertation research or monograph research for doctoral candidates. Dissertation/Monograph Research credit maintains the continuous enrollment as required by the University.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Music & Dance, Boyer College.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Narrative Medicine (NMED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**NMED 8101. Introduction to Narrative Medicine (Professional Students). 3 Credit Hours.**

Introduction to Narrative Medicine is designed to introduce students to narrative medicine in close observation of the human experience especially as it relates to sickness and to health. In a small seminar format using lecture, careful analysis of literature, writing exercises, course discussion and shadowing in the hospital, students will explore the role of narrative in medicine and the vast expanse of human stories. The course will focus on the discipline of narrative medicine and the role of narrative in health care; narratives of illness and health; and narratives written by doctors. During this course, students will learn methods of observation and communication and hone their ability to hear stories and to tell them. The course will include one short and one longer shadowing experience most likely in the Emergency Department or Intensive Care Unit of Temple University Hospital to connect our students to the practice of medicine.

**Repeatability:** This course may not be repeated for additional credits.

**NMED 8102. Literature and Medicine (Professional Students). 2 Credit Hours.**

The goal of this course is to use literature and reflective writing to deepen students' understanding of human experience in healthcare, including the experiences of patients and those that influence their own professional identity development. Students will be divided into groups of 4-6 members who will collectively select three books from a suggested reading list. One or two will be about being or becoming a doctor or other health practitioner and one or two will be about the experience of being a patient. Students will also write two reflective essays. Discussion of the books and student essays will be done both in the classroom and online.

**Repeatability:** This course may not be repeated for additional credits.

**NMED 8103. Narrative Medicine and Clinical Practice (Professional Students). 2 Credit Hours.**

Narrative Medicine and Clinical Practice for Professional Students is designed for LKSOM MD Program enrolled students. Narrative Medicine and Clinical Practice for Professional Students will align with the clinical rotations of third year LKSOM MD students and offer an opportunity to metabolize the experiences of modern medicine. This course will meet in small groups for 12 sessions that are 2.5 hours. Meetings will take place at convenient times based on the clinical schedules of the students enrolled aiming for one course meeting during each clinical block. In this course we will use close reading of fiction and non-fiction literature alongside current clinical experiences to explore a range of topics relevant to the professional development of all doctors.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in NMED 8101 and NMED 8102.

**NMED 8200. Special Topic in Narrative Medicine (Graduate Students). 1 Credit Hour.**

Students may select from the Narrative Medicine Elective courses offered as part of the LKSOM MD Program. Students should contact the Dean of Students Office at LKSOM to determine the specific courses offered each semester. Examples of LKSOM MD Program Narrative Medicine Elective courses currently offered are: MEDS M240 - An Exploration of Narrative Medicine, MEDS M243 - Humans of North Philly, MEDS M270 - Artful Thinking, MEDS M226 - Arts Workshop, MEDS M227 - Fundamentals of Improvisational Theater, MEDS M241 - An Exploration of Meaning Through Stories, Poems, and Plays, MEDS M234 - Yoga and Writing, MEDS M143 - Medical Humanities, PSYM M266 - Psychiatry: A Narrative Pursuit, and MEDS M130 - Reflections on Gross Anatomy.

**Repeatability:** This course may be repeated for additional credit.

**NMED 8201. Introduction to Narrative Medicine (Graduate Students). 3 Credit Hours.**

Introduction to Narrative Medicine is designed to introduce students to narrative medicine in close observation of the human experience especially as it relates to sickness and to health. In a small seminar format using lecture, careful analysis of literature, writing exercises, course discussion and shadowing in the hospital, students will explore the role of narrative in medicine and the vast expanse of human stories. The course will focus on the discipline of narrative medicine and the role of narrative in health care; narratives of illness and health; and narratives written by doctors. During this course, students will learn methods of observation and communication and hone their ability to hear stories and to tell them. The course will include one short and one longer shadowing experience most likely in the Emergency Department or Intensive Care Unit of Temple University Hospital to connect our students to the practice of medicine.

**Repeatability:** This course may not be repeated for additional credits.

**NMED 8202. Literature and Medicine (Graduate Students). 2 Credit Hours.**

The goal of this course is to use literature and reflective writing to deepen students' understanding of human experience in healthcare, including the experiences of patients and those that influence their own professional identity development. Students will be divided into groups of 4-6 members who will collectively select three books from a suggested reading list. One or two will be about being or becoming a doctor or other health practitioner and one or two will be about the experience of being a patient. Students will also write two reflective essays. Discussion of the books and student essays will be done both in the classroom and online.

**Repeatability:** This course may not be repeated for additional credits.

**NMED 8204. Narrative Medicine and Clinical Practice (Graduate Students). 2 Credit Hours.**

Narrative Medicine and Clinical Practice for Graduate Students is designed for the non-LKSOM MD Program enrolled students. Narrative Medicine and Clinical Practice for Graduate Students will offer students an opportunity to metabolize the experiences of modern medicine as experienced by the patient and the caregiver. This course will meet in small groups for 12 sessions that are 2.5 hours each. Meetings will take place at convenient times based on the schedules of the students enrolled aiming for one course meeting every 2 weeks. In this course we will use close reading of fiction and non-fiction literature alongside current clinical experiences to explore a range of topics relevant to the professional development of all caregivers. Students enrolled working in clinical fields (social work, nursing, dental, etc.) will use their current clinical experiences. Those not currently in a patient-facing field will be given time to shadow in hospital and clinical settings as arranged by the course director to provide relevant experience for in-class discussion.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in NMED 8201 and NMED 8202.

**NMED 9182. Narrative Medicine Capstone Project (Professional Students). 3 Credit Hours.**

Working in conjunction with an advisor from the core narrative medicine faculty, the student will craft and complete an independent project on a narrative medicine topic/area of particular interest. The student will collaborate with academic, medical, and community mentors as appropriate to conceive, develop, undertake and complete the project. This may involve, but is not limited to, creation of a capstone paper, a creative writing project, a research study, curriculum development, or photo essay. Its final form should be in a manner that can be shared - in publication, display, performance, grand rounds presentation or some other manner suitable to the project.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in NMED 8103.

**NMED 9282. Narrative Medicine Capstone Project (Graduate Students). 3 Credit Hours.**

Working in conjunction with an advisor from the core narrative medicine faculty, the student will craft and complete an independent project on a narrative medicine topic/area of particular interest. The student will collaborate with academic, medical, and community mentors as appropriate to conceive, develop, undertake and complete the project. This may involve, but is not limited to, creation of a capstone paper, a creative writing project, a research study, curriculum development, or photo essay. Its final form should be in a manner that can be shared - in publication, display, performance, grand rounds presentation or some other manner suitable to the project.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in NMED 8204.

## Neurology (NEUR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**NEUR M239. Clinical Neurology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**NEUR M250. Neurology of Behavior. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**NEUR M300. Neurology Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**NEUR M370. Neurology. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**NEUR M471. Vascular Neurology Elective. 0 Credit Hours.**

The Vascular Neurology Elective is designed to give the student increased exposure and autonomy in care of the neurology patient. It is further designed to give the student additional experience and increased knowledge of vascular neurological disorders.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in NEUR M370.

**NEUR M472. Neuromuscular Elective. 0 Credit Hours.**

The purpose of the Neuromuscular Elective is to provide medical students with a greater depth and breadth of exposure to neurology patients who have a primary neuromuscular disorder. During this rotation, students will have the opportunity to: 1) Participate in the care of patients with ALS, muscular dystrophy, and neuropathy in a multidisciplinary clinic, 2) Evaluate and participate in the diagnosis and treatment of a broad spectrum of neuromuscular disorders, 3) Observe electrophysiological testing (electromyography and nerve conduction studies) and interpret the results, and 4) Interpret nerve and muscle biopsies. The students will also participate in the multidisciplinary MDA clinic at Good Shepard Hospital in Allentown, PA.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in NEUR M370.

**NEUR M473. Clinical Neuropsychology. 0 Credit Hours.**

This elective is housed within the Neuropsychology Department of SLUHN's Center for Neuroscience. Students will learn a broad range of neuropsychological assessment procedures and are exposed to virtually every neuropathological condition including the full spectrum of neurodegenerative disease processes, movement disorders, closed and penetrating head injuries, sports concussion, epilepsy, cerebrovascular diseases and accidents, neoplastic disease, and cognitive change due to other complex medical or neurologic conditions. This elective will give the student exposure to the full process of a comprehensive neuropsychological evaluation, including clinical interviewing, test selection and administration, scoring and interpretation, report writing, and delivering feedback to the patient.

**Repeatability:** This course may be repeated for additional credit.

**NEUR M600. Neurological ICU (NICU) - Critical Care. 0 Credit Hours.**

The required critical care course will introduce students to the management of critically ill patients. Students are expected to follow their patients' progress and contribute to their care with supervision. Students will observe and assist as possible in procedures being performed in the ICU. Students will obtain exposure to assisted ventilation, palliative and end-of life care.

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in INTM M301, OBGY M320, PEDI M330, PSYM M340, SURG M350, NEUR M370, and FAMP M360.

**NEUR M601. Neurology. 0 Credit Hours.**

**Course Attributes:** M2

**NEUR M602. Clinical Epilepsy & EEG. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**NEUR M612. Neuro-Ophthalmology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**NEUR M613. Neuroimmunology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

## Neuromotor Science (NMS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**NMS 9621. Neuromotor Science 1: Neural Factors. 3 Credit Hours.**

Current theories and research pertaining to the neural mechanisms underlying motor control, sensorimotor integration and motor learning will be introduced as a foundation for understanding functional movement and motor deficits. The roles of selected brain regions as they relate to different aspects of motor behavior will be discussed. Lesions studies will be presented to further demonstrate the impact of neural impairments on movement performance and motor learning. Application of neurophysiologic methods that evaluate the relationship between neural circuitry and human movement (e.g., EMG, MRI, PET, EEG, TMS) will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NMS 9622. Neuromotor Science: Instrumentation. 3 Credit Hours.**

Instrumentation is an introduction to electrical components and circuits, and their role in the function of laboratory instrumentation. The main goal of this class is to develop the student's competence in managing the instrumentation and the quality of resultant data for motion analyses through an understanding of data acquisition equipment that is appropriate to their chosen research area. The student will be exposed to basic electronic design of filters, amplifiers, and A/D sampling as well as selected pieces of laboratory instrumentation. The class is organized in a lecture/lab structure.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NMS 9623. Neuromotor Science: Programming. 3 Credit Hours.**

This course is designed for students with little to no programming skills to help them with a general understanding of computer hardware, software, and the interaction between the two. Factors that make the use of the computer useful to neuromotor research will be presented. Basic computer architecture and operating systems will be discussed in this class. The student will gain a basic understanding of software programming logic and structures as well as signal processing techniques for analysis of human movement data. The goal of this course is for students to gain skills in basic programming for scientific data analysis of time series data with Matlab. In addition, students will also be exposed to software packages commonly used for movement analysis such as LabView, C, Visual-3D, and OpenSIM. The class is organized in a lecture/lab structure.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NMS 9624. Neuromotor Science 2: Mechanics and Models. 3 Credit Hours.**

Application of mechanical principles to static and dynamic models of human posture and movement and of the mechanical properties of the link-segment systems and biological tissue are introduced in this course. Theoretical frameworks, computational, and statistical models (e.g., dynamical systems, equilibrium point, control theory, and Bayesian) are introduced as a basis for understanding the organization of complex movement patterns. Interpretation of the model predictions is based on both healthy individuals and those with movement deficits. The first half of the course will focus on the development of the tools necessary to conduct biomechanics research, process the data, and perform biomechanical data analysis. The second half of the course will work through common biomechanics questions related to human movement in three dimensions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NMS 9627. Neuromotor Science 3: Cognition and Learning. 3 Credit Hours.**

This course focuses on current theories and research related to cognitive and learning processes that influence motor behavior. Objectives include examination of lifespan motor development and learning, attentional mechanisms, perceptual effects on motor output, implicit and procedural memory effects on motor control, automatic compensatory responses and/or strategies following injury or disease, and the factors that influence adaptation and learning to long- and short-term changes in the body or environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NMS 9653. Grantsmanship. 3 Credit Hours.**

This course exposes the Ph.D. level student to the mechanisms and methods of acquiring funding for Behavioral and Somatic Science Research. Students will learn Grantsmanship - the skills required to write a grant proposal. Learning experiences consist of literature review, writing key sections of a grant application, and if applicable, subject recruitment. Class time will be divided into lectures and discussion of assignments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NMS 9654. Neuromotor Science: Laboratory Rotation and Seminar. 1 to 3 Credit Hour.**

This course provides the student with an in-depth exposure to the laboratory methods and focus of a faculty member. Students will learn the conceptual basis for the research as well as technical skills such as instrumentation and data analyses pertinent to the areas of research that are core to the NMS program or in a cognate area of interest to the student. Two rotations (6 credit hours) are required for the Ph.D. degree students and a single rotation (3 credit hours) for the MS degree students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**NMS 9682. Neuromotor Science: Independent Study. 1 to 3 Credit Hour.**

This course provides an opportunity for independent investigation and analysis of the intellectual, physical, social, psychological, and ethical bases of human movement. An independent study allows students to explore a well-defined area within Neuromotor Science and related fields in greater depth providing an opportunity for independent investigation and analyses of topics that enrich their academic and research training.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**NMS 9994. Doctoral Preliminary Exams. 1 Credit Hour.**

This course supports preparation for taking the preliminary examinations in the Neuromotor Science program. To enroll, students must have completed all required coursework for the Ph.D. and obtain the approval of the Ph.D. Program Director. Students must be enrolled to take the required preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**NMS 9998. Dissertation Proposal. 1 to 2 Credit Hour.**

This course supports preparation of the dissertation proposal. The course is required for students who have passed the preliminary examinations for their programs and who have not yet defended the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in NMS 9994.

**NMS 9999. Dissertation Research. 1 to 3 Credit Hour.**

This course is limited to Ph.D. candidates who have completed and defended a dissertation proposal that is filed with the Graduate School by the last day to add a course in the semester. Continuous registration in 9999 fall and spring is required until the dissertation is successfully defended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in NMS 9994.

## Neuroscience (CLA) (NSCI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**NSCI 5001. Systems and Behavioral Neuroscience. 3 Credit Hours.**

The goals of this class are to expose Master's degree students to topics in systems and behavioral neuroscience. In addition, students will also be introduced to methods and techniques used for the analysis of neural and behavioral data. Through intensive instruction of systems underpinning sensory, motor, and integrative functions, as well as motivation, students will gain a thorough understanding of brain function/behavior and its neuronal correlates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NSCI 5002. Neurochemistry. 3 Credit Hours.**

This course explores the major areas of cellular and molecular neurobiology, including cellular and subcellular components of the nervous system, neuronal excitability and molecular properties of ion channels, biochemistry of synaptic transmission, intracellular signaling, neurochemistry of learning and memory, cell injury and inflammation and psychiatric/neurodegenerative disorders. Material includes lectures, presentations and discussion of primary literature and journal articles that cover recent advances in the field. Additionally, students will get the opportunity to gain hands-on experience with some of the research methodologies used to study neurochemical processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NSCI 5016. Professional Development in Neuroscience. 3 Credit Hours.**

This course will help prepare you for the remainder of your master's degree by providing the required laboratory and animal training, laboratory technique training, research and presentation skills training, and discussion of ethical issues in the field. The first module of this course will cover all the necessary laboratory and animal training and the second module will expose students to contemporary neuroscience techniques. The third module will provide training in research and presentation skills including how to design a research study, write a research paper and presenting your results. In the fourth module, we will discuss the ethical issues in neuroscience and consider the future challenges that may arise from the evolving study of the genetic and neurobiological determinants of behavior.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NSCI 8007. Neuroendocrinology. 3 Credit Hours.**

This course will provide an in-depth exploration of the interactions between the endocrine system and the nervous system. The role of hormones in modulating behaviors and mental processes will be covered with the following topics: sex determination and differentiation, reproduction, parental behavior, social behavior, homeostasis, biological rhythms, stress, learning and memory, and affect. Multidisciplinary approaches to understand neuroendocrine function and dysfunction from the molecular to systems level will be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NSCI 8008. Neuropsychopathology. 3 Credit Hours.**

This course will provide an in-depth exploration of neuropsychopathology. Students will learn about recent advances in the understanding of the neurobiology mechanisms that underlie psychiatric disease, neurodegenerative, and neurological disorders. How available and experimental treatments for these disorders work also will be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NSCI 8009. Neuroscience Drug Discovery. 3 Credit Hours.**

This course will consist of a series of didactic sessions and seminar-style discussions on topics that cover major aspects of the drug discovery process including lead/target identification, validation, preclinical pharmacology, toxicity and clinical trials. The course will also address unique challenges of research translation from preclinical to early and late phases of clinical development. Additionally, the technical and clinical aspects of biomarker validation needed to be applied to the different aspects of drug development process will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NSCI 8010. Topical Seminar in Neuroscience. 3 Credit Hours.**

This seminar course will expose graduate students to contemporary issues in a specific area of neuroscience. Students will examine different topics through interactive lectures, discussion of research papers in a seminar-like format, and critical analysis of research studies. Importantly, this course will allow students to develop perspectives on recent advances in diverse areas including cellular and molecular neuroscience, systems and behavioral neuroscience, developmental neuroscience, social neuroscience, cognitive neuroscience, and overlapping cross-cutting themes across these areas. The course topics/themes will vary from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**NSCI 9381. Readings in Neuroscience. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**NSCI 9991. Directed Research. 1 to 6 Credit Hour.**

This course is intended to meet the needs of students who desire to carry on an individual investigation while working towards the Master's degree in Neuroscience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Neurosurgery (NESU)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **NESU M199. Neurosurgery/Elective. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

### **NESU M300. Neurosurgery Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

### **NESU M311. Career Exploration of Neurosurgery. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

### **NESU M611. Neurosurgery. 0 Credit Hours.**

**Course Attributes:** M2

### **NESU M612. Cranial Neurosurgery. 0 Credit Hours.**

This course is for students applying for a Neurosurgery Residency to get a more in-depth experience in Neurosurgery. They will focus on Cranial Neurosurgery. They will participate in the OR, inpatient and outpatient.

**Repeatability:** This course may be repeated for additional credit.

### **NESU M811. Neurosurgery Sub-I. 0 Credit Hours.**

Neurosurgery Sub-I satisfies the sub-I requirement for 4th year. Students will participate on the Neurosurgery service, in both the inpatient and outpatient setting. They will take on the role of an intern, including seeing consults, following patients, seeing patients in clinic and participating in OR cases. They will develop assessment and plans for the patients they are seeing.

**Repeatability:** This course may be repeated for additional credit.

## Nursing (NURS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **NURS 5101. Translation of Evidence in Healthcare. 3 Credit Hours.**

The course provides the basis for clinical scholarship development by focusing on essential skills for applying evidence into advanced nursing practice and healthcare systems. Conceptualization, definition, theoretical rationale, and models of evidence-based practice will be evaluated. Students will explore the concept of practice-based knowledge and the process of translation of research into practice. Students will perform a critical review and synthesis of knowledge in their own area of concentration and will identify key concepts and relationships for their practice change that will become the foundation for their scholarly project proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **NURS 5401. Advanced Physiology and Pathophysiology. 4 Credit Hours.**

A systems approach is used to review normal physiology and analyze selected acute and chronic pathophysiologic states across the life span to provide the scientific rationale for safe and effective advanced nursing practice. Pathophysiologic processes of diseases across the lifespan are explored within the context of health promotion, disease prevention, and evidence-based practice.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 5402. Advanced Pharmacotherapeutics. 4 Credit Hours.**

This course will explore the principles of advanced pharmacology as they apply to various disease states with consideration of medication selection factors, client adherence, and ethical implications of prescribing. The pharmacokinetics, pharmacodynamics, adverse drug effects, precautions, and drug interactions of broad categories of drugs are examined. Safe prescribing of therapeutic agents is addressed within the context of specific populations.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 5401.

**NURS 5501. Theories for Advanced Practice Nursing of Families and Individuals. 3 Credit Hours.**

Advanced Practice Nursing students in this course will gain an understanding of families and current family theories (e.g., systems theory, developmental, communication, and stress theories) in detail. They will examine the interaction of family structure, function, traits, processes, and health for diverse families using a life-cycle approach. Case studies will focus on individuals, families, and communities dealing with health protection, health promotion, disease prevention, and acute and chronic illnesses. Students will plan assessments and empirically-based interventions for diverse, traditionally underserved families. Students will have the opportunity to present their application of a specific family theory to a selected clinical situation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 5552. Advanced Health Assessment and Clinical Reasoning. 4 Credit Hours.**

This course focuses on developing advanced health assessment skills needed to formulate differential diagnoses in the care of individuals across the lifespan. Students will use clinical reasoning to distinguish abnormal from normal findings using advanced assessment techniques for culturally diverse patients.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 5402.

**NURS 8101. DNP Project Development I. 1 Credit Hour.**

This course is the first in a series of three. Utilizing a systems or population focus, the student identifies an issue that impacts healthcare outcomes either through direct or indirect care. The PICOT question format is used to frame and answer the clinical or health care related question, guided by the evidence base. In partnership with an appointed faculty mentor the student identifies a community partner with similar interests and establishes a collaborative agreement for future project-related work to address the question of interest as applied in the community setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 5101.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 8102. DNP Project Development II. 1 Credit Hour.**

This course is the second in a series and focuses on the partnership with the identified community partner to develop and refine the Doctor of Nursing Practice (DNP) project. The student collaborates with the partner to finalize the overall project plan, design the implementation, and establish the evaluation process including identifying outcome measures. Further work on the scholarly product will continue through to the DNP Implementation course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 8302.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 8101.

**NURS 8103. DNP Project Implementation. 3 Credit Hours.**

This is the final course in the series. Students incorporated previously acquired knowledge and skills to demonstrate integration of the advanced practice nurse role and successful execution of the Doctor of Nursing Practice (DNP) project. The project is derived from evidence-based research and evolves from a student-initiated area of interest, informed by coursework, the clinical practice experience and collaboration with a community partner. Project execution included evaluation and dissemination of the findings that includes a public presentation and scholarly paper.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 8102.

**NURS 8201. Health Indices of Urban Populations in Primary Health Care. 3 Credit Hours.**

This course examines factors critical to the health status of diverse populations across settings, with particular emphasis on urban environments.

Variables explored include, but are not limited to, the dynamically interacting systems of education, housing, architecture, transportation, health care delivery, government, economics, law, religion, and culture. The relationships among these potential influences on health status are explored within the context of class and economics as key drivers of health indices. Students engage in course requirements that generate critical analysis of environmental systems that perpetuate poor health indices, particularly among minorities. Students engage in nursing-focused case analyses, problem-based exercises, class discussion, and debates as vehicles for understanding the key constructs explicated in this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in NURS 5901.

**NURS 8204. Policy: Health Care Advocacy in Advanced Nursing Practice. 2 Credit Hours.**

Health policy and the processes and procedures that inform development and implementation are analyzed to assess impact on individual and population health. Social, cultural, economic, and demographic factors are considered. Students discuss and debate principles of equity, quality care, and health promotion and illness prevention within the broad context of access, insurance and delivery of advanced practice nursing, comparing and contrasting US and international practices. The roles and responsibilities of the health care team are dissected, with a focus on collaboration and delegation as a means to achieve cost effective quality care. Nursing's advocacy role in policy evolution is explored and evaluated.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 8205. Nursing Leadership for Systems and Communities. 2 Credit Hours.**

This seminar is the core leadership course for all DNP students. It is designed to help students appreciate and understand the impact of their own strengths and biases, reflect on the importance of diversity in healthcare, and prepare to function and lead effectively within teams to meet the needs of the community. Students will learn about team science and critically analyze various approaches to promoting high-impact teams. They will become self-aware leaders and begin reflective leadership practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**NURS 8206. Health Economics and Business Practices in Primary Healthcare. 2 Credit Hours.**

Concepts that influence quality, access, and equity are explored to assess impact on the delivery of healthcare in the US. Reimbursement systems are examined to assess the impact on care decisions made at individual, family, community, and population levels. Gaps in healthcare financing resulting in compromises in health delivery are analyzed, with alternative models of healthcare coverage explored. The integration of business and financial principles into health care delivery is evaluated. Multiple data sets are analyzed to identify variations in health outcomes and to inform the system enhancements students propose to improve outcomes.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 8207. Advancing Health Through Information Technology. 2 Credit Hours.**

Course content emphasizes the role of information technology in supporting the advanced practice nurse as healthcare provider, administrative/financial manager, client educator and researcher, in a variety of health care settings. Foundational concepts in nursing informatics, and its applications in point-of-care technology, data management and analytics, and patient safety and quality are reviewed. Emerging developments in nanotechnology, genomics, and the harnessing of social media in healthcare delivery are explored.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 8302. Managing Quality Initiatives Through Nursing Quality Initiatives. 3 Credit Hours.**

This course focuses on improving health outcomes for individuals and populations through analysis of health reports and implementation of quality initiatives. Organizational systems are analyzed to identify barriers to achieving quality outcomes, including practice patterns, perceived incongruence between productivity and quality, and issues of sustainability. Using the principles of evidence-based practice, we will also discuss programmatic initiatives and policy changes that may lead to improved health outcomes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**NURS 9182. Independent Study. 1 to 6 Credit Hour.**

This course is an independent study arranged by a student with a faculty member who has an area of expertise consistent with the project the student wants to develop.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**NURS 9189. Collaborative Partnerships: Interdisciplinary. 1 Credit Hour.**

Interactions between health care professional teams within a health care delivery system are explored through case study methodology and fieldwork, relative to a health-related issue. Leadership, communication and team practice capabilities will be compared and contrasted among teams with and without a nurse working in an advanced nursing practice role.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 9289. Collaborative Partnerships: Transdisciplinary. 1 Credit Hour.**

Moving beyond discipline-specific approaches, the advanced practice nursing student will partner with professionals from other fields, such as engineering, criminal justice and education to identify a community issue with health implications and propose an intervention to address the issue that considers and integrates concepts, theory and methodology from nursing as well as other disciplines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 9377. Primary Care of Adults I Theory. 3 Credit Hours.**

This course focuses on a holistic approach to primary care for the young, middle-aged and older adult patient. National guidelines inform the primary, secondary, and tertiary prevention of acute and chronic health problems, as well as health concerns that commonly occur in this population, considerate of age, race/ethnicity and gender, as well as the social determinants of health. Evidence-based health promotion strategies that support patients to establish and maintain healthy habits are explored. Clinical reasoning is further refined by incorporating nursing, biomedical, and complementary models of care delivery to achieve optimal health outcomes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9387.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 5552, NURS 5401, and NURS 5402.

**NURS 9387. Primary Care of Adults I Practicum. 2 Credit Hours.**

This clinical course focuses on knowledge derived from core and advanced core courses as well as the concurrent NURS 9377 theory course to provide primary care to the young, middle-aged and older adult patient. Clinical experiences focus on care of the individual within the context of family and the health care community.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9377.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 9389. DNP I Practicum. 2 to 4 Credit Hours.**

In this supervised immersion practicum experience, the post-masters nursing student will integrate and demonstrate new skills and knowledge consistent with the Doctor of Nursing Practice Essentials and an advanced nursing practice framework. The practicum experience occurs within a variety of health-related environments and focused areas of specialization under the supervision of a preceptor(s), identified in collaboration with academic program faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in NURS 8302, NURS 8102, NURS 8204, and NURS 8205.

**NURS 9477. Primary Care of Adults II Theory. 3 Credit Hours.**

This course continues to develop the content introduced in the Primary Care of Adults I course that focuses on a holistic approach to primary care of the young, middle-aged and older adult patient. Evidence-based management of increasingly complex and co-morbid conditions is reviewed with a focus on further development of competency, advocacy and appropriate engagement of others on the health care team. Strategies to enhance meaningful family and community engagement are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9487.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 9377.

**NURS 9487. Primary Care of Adults II Practicum. 2 Credit Hours.**

Further development of critical thinking and clinical judgment and decision making skills occur in the primary care setting with a continued focus on young, middle-aged and older adults with increasingly complex acute and chronic conditions. There is increased participation by the advanced practice nursing student as a valued member of the care team. Family and community engagement is prioritized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9477.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 9489. DNP II Practicum. 2 to 4 Credit Hours.**

In this supervised immersion practicum experience, further development and integration of the DNP role occurs as the post-masters student continues to build and assimilate knowledge and skill for advanced specialty practice at a high level of complexity. The practicum experience may occur within a variety of health-related environment/s and focused area/s of specialization under the supervision of a preceptor/s, identified in collaboration with academic program faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in NURS 9389.

**NURS 9577. Primary Care of the Elderly I Theory. 3 Credit Hours.**

This introductory theory course incorporates a holistic approach to healthy aging of the elderly population. Students are introduced to the primary, secondary and tertiary prevention of acute and chronic health conditions that commonly affect this population. Interventions that support healthy, therapeutic lifestyles and symptom management of the elderly are reviewed. Advocacy for elders in general and those living in urban poverty is explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9587.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 9477.

**NURS 9587. Primary Care of the Elderly I Practicum. 2 Credit Hours.**

In this clinical fieldwork experience, knowledge and skill development is applied to the primary care management of the elderly. The focus includes health maintenance, health promotion, improving health outcomes, reducing health risks, and preventing disease and/or disease progression, within the context of family, community and team practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9577.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 9677. Primary Care of the Elderly II Theory. 3 Credit Hours.**

Approaches to engaging and collaborating with formal and informal health care delivery systems to ensure quality care for elderly populations are discussed. Strategies to optimize functional status, quality of life, and improve health related outcomes are explored with attention to maximizing proficient use of cognitive, psycho-motor, and affective abilities. Management of common and complex health care problems is reviewed relative to normal changes associated with aging and pathological changes that occur with disease. The impact chronic illness has on the individual, family and community is considered. Challenges implementing preventive health recommendations and treating illness when working with under-served urban populations are discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9687.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 9577.

**NURS 9687. Primary Care of the Elderly II Practicum. 2 Credit Hours.**

The clinical fieldwork experience provides opportunities to further develop knowledge and skill in the care of older adults with increasingly complex acute and chronic conditions. There is increased participation by the advanced practice nursing student as a valued member of the care team. Family and community engagement is prioritized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9677.

**Repeatability:** This course may not be repeated for additional credits.



**NURS 9777. Primary Care of Children and Youth Theory. 3 Credit Hours.**

This course focuses on a holistic approach to primary care for children, adolescents and family. National guidelines that inform primary, secondary, and tertiary prevention of common acute and chronic health problems are reviewed, with a focus on the unique needs of families affected by urban poverty. Through the delivery of primary care, the child and family are supported to establish healthy habits and achieve maximum potential, considerate of developmental stage, anticipatory guidance needs and community resources. Clinical reasoning skills are refined by incorporating nursing, biomedical, and complementary models to foster optimal health outcomes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9787.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NURS 9577.

**NURS 9787. Primary Care of Children and Youth Practicum. 2 Credit Hours.**

This clinical course focuses on knowledge derived from core and advanced core courses as well as the concurrent NURS 9777 theory course to provide primary care to pediatric populations. Clinical experiences focus on care of the individual and family within the health care delivery system and the community.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Co-requisites:** NURS 9777.

**Repeatability:** This course may not be repeated for additional credits.

**NURS 9885. DNP Clinical Capstone. 3 Credit Hours.**

This course facilitates students' integration of evidence-based research and leadership within their fieldwork practicum. Through critical analysis of knowledge supportive of their practice, students progress from the role of novice provider to more sophisticated and skilled advanced practitioners. The program's systems orientation is explicated in practice through seminars, assignments, fieldwork, and professional presentations. Working in concert with one or more fieldwork preceptors, students practice in their selected specialty track and implement complex clinical reasoning in the provision of care appropriate to the client: an individual, family, community, or the public at large. Students' fieldwork, seminars, and course requirements culminate in nursing expertise in our culture's evolving health care delivery system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (NURS 8302 and NURS 5903)

**NURS 9886. DNP Evidence-Based Practice Project Implementation. 3 Credit Hours.**

This course is a culminating experience for students as they incorporate leadership attributes into their professional repertoire, assuming roles demanding evidence-based change in a selected field. Integrating previously acquired knowledge and skills, students demonstrate successful execution of a fieldwork project in concert with their project mentor(s). Such projects, derived from evidence-based research, evolve from needs identified in the fieldwork experience. Through faculty and mentor-guided seminars, students design and implement projects, providing their fieldwork agencies with final presentations. In cooperation with fieldwork mentors, strategic plans to integrate and evaluate project results are incorporated in final projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Nursing Practice.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in NURS 9885.

## Nutrition (NUTR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**NUTR 5015. Nutrition Education and Counseling. 3 Credit Hours.**

Nutrition Education and Counseling is an introductory public health course that explores the role individual and community factors on food and nutrition behaviors. Students will learn about individual influences on nutrition behavior and the application of behavioral change theory to individual nutrition counseling and group education. Course assignments will include counseling simulations and developing and presenting a nutrition education session. After completing this course, students will be prepared to work with a diverse range of people in individual and community settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NUTR 5025. Food Preparation and Management I. 1.5 Credit Hour.**

Food Preparation and Management I is an introductory food service course that provides students with food preparation and management skills. In the first half of the course, students will develop culinary skills and apply food science principles in the cooking lab. In the second half of the course, students will develop food management skills, such as menu planning, food safety and food storage and budget management. After completing the course, students will have the food planning, preparation and management skills needed for food service Supervised Experiential Learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NUTR 5035. Nutritional Biochemistry. 3 Credit Hours.**

Nutritional Biochemistry is an introductory clinical nutrition course that provides students with foundational knowledge about nutrient metabolism. Students will learn about the role of micro- and macro-nutrients in the maintenance of health and the progression of disease. After completing this course, students will be able to describe the physiology and pathophysiology of micro- and macro-nutrients.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**NUTR 5087. Food Preparation and Management I. 1.5 Credit Hour.**

Food Preparation and Management I is an introductory food service course that provides students with principles of food science and techniques of food preparation. This course entails a minimum of 140 hours of supervised experiential learning hours in a food service facility. It includes development of food service skills, application of culinary techniques, and joint supervision by a preceptor and faculty member. Completion of the ServSafe Manager Certification is required for all students prior to starting the course.

**Repeatability:** This course may not be repeated for additional credits.

**NUTR 5387. Dietetics Experiential Learning. 3 Credit Hours.**

This practicum course consists of two components: Supervised Experiential Learning in the field, accompanied by classroom sessions. Students will spend a minimum of 280 hours rotating through inpatient and outpatient clinical nutrition settings. Students will observe and assist preceptors in providing nutrition services, including nutrition assessments, diagnosis, intervention, and monitoring of patients across disease states. Classroom sessions will involve discussions about relevant nutrition issues and student presentations.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NUTR 5535.

**NUTR 5525. Food Preparation and Management II. 1.5 Credit Hour.**

Food Preparation and Management II is an upper-level food service course that provides students advanced food service and management skills. Students will develop a deeper understanding of food systems by reflecting on their food service Supervised Experiential Learning and completing collaborative assignments. The course culminates in a Capstone Meal, a project that requires the application of advanced food service knowledge and skills. After completing this course, students will be competent in large-scale menu planning, food safety principles, food storage practices and food distribution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NUTR 5387.

**NUTR 5535. Medical Nutrition Therapy. 3 Credit Hours.**

Medical Nutrition Therapy is an intermediate clinical nutrition course that provides students with the skills to diagnose and treat nutrition-related diseases. Students will apply their nutritional biochemistry background as they explore the role of nutrition in treating disease. After learning about the key components of Nutrition Care Process, students will complete case studies in which they assess, diagnose, treat and monitor mock patients. After completing this course, students will have the knowledge and skills needed for clinical Supervised Experiential Learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NUTR 5035.

**NUTR 5815. Cultural and Community Nutrition. 3 Credit Hours.**

Cultural and Community Nutrition is an advanced public health course that explores the social determinants of health. Students will explore the role of cultural identity, social and physical environment and economic status on food and nutrition behaviors. Assignments will involve engaging with the community and reflecting on this experience. After taking this course, students will have skills for practicing cultural responsiveness and have a deep understanding of environmental influences on health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NUTR 5387.

**NUTR 5835. Nutrition Through the Lifecycle. 3 Credit Hours.**

Nutrition Through the Lifecycle is an advanced clinical nutrition course that draws on students' existing clinical knowledge, skills and judgement. Students will explore acute nutrition conditions at each stage of the lifecycle, as well as the longitudinal effect of chronic diseases. After completing this course, students will be competent in applying the Nutrition Care Process in health promotion and disease treatment at all stages of the lifecycle.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in NUTR 5387.

**NUTR 9289. MPH Fieldwork I. 3 Credit Hours.**

This course entails a fieldwork project or internship in a public health agency. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 5006, EPBI 5101, HPM 5006, SBS 5001, and NUTR 5015.

**NUTR 9389. MPH Fieldwork II. 3 Credit Hours.**

This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 5006, EPBI 5101, HPM 5006, SBS 5001, NUTR 5015, and NUTR 9289.

## **Obstetrics, Gynecology & Reproduction (OBGY)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**OBGY M289. Intro to Clin OB/GYN. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**OBYG M300. Obstetrics/Gynecology Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**OBYG M307. Career Exploration of Gynecological Oncology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**OBYG M320. Obstetrics/Gynecology. 0 Credit Hours.**

**Course Attributes:** M7

**Repeatability:** This course may not be repeated for additional credits.

**OBYG M325. Career Exploration of Reproductive Endocrinology and Infertility. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**OBYG M433. Family Planning and Public Policy. 0 Credit Hours.**

This elective will provide medical students with an overview on Family Planning as a subspecialty of Obstetrics and Gynecology, with particular focus on elective pregnancy termination. Students will participate in an online curriculum which will cover the epidemiology, political and cultural barriers, as well as national and international health inequities of abortion. Through online pre-recorded lectures and live zoom sessions, students will develop a firm understanding of how to approach counseling patients with unintended pregnancy, the abortion methods used in the first and second trimesters, and how to manage basic complications. They'll read the landmark studies contrasting outcomes of women having access to and those being denied an abortion in the United States and around the world. The student will write an essay that may be op-ed style, poetry, or a personal narrative highlighting an area of family planning for bioethical discussion. They'll submit their work for publication with support from the Ob/Gyn faculty.

**Repeatability:** This course may be repeated for additional credit.

**OBYG M800. General Obstetrics/Gynecology. 0 Credit Hours.**

**Course Attributes:** M2

**OBYG M802. Gynecology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**OBYG M803. Obstetrics. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**OBYG M805. Maternal Fetal Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**OBYG M807. Gynecological Oncology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**OBYG M815. Repro. Endocrin & Infertility. 0 Credit Hours.**

**Course Attributes:** M2

**OBYG M820. Urogynecology and Pelvic Reconstructive Surgery. 0 Credit Hours.**

A four-week elective clinical experience in both ambulatory and inpatient setting addressing medical and surgical problems of a urogynecologic nature.

**OBYG M895. OB/GYN Subinternship. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may be repeated for additional credit.

## Occupational Therapy (OTHR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **OTHR 5001. Developmental Perspectives in Occupational Therapy. 2 Credit Hours.**

This course explores human development and the relation to occupational performance. A study of sensory, physical, cognitive, emotional and sociocultural aspects of human development is emphasized to analyze occupational performance. Lecture, small group, and active learning experiences enhance the analysis and synthesis of developmental perspectives with occupational therapy practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5014.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5002 and OTHR 5005.

### **OTHR 5002. Theoretical Perspectives of Occupation. 2 Credit Hours.**

This course will explore the meaning and purpose of human occupation. Theoretical perspectives of occupation will analyze the construction of skills, habits, roles, and occupations for individuals and populations within various social and cultural contexts. Lecture, small group, and active learning experiences enhance the analysis and synthesis of theoretical perspectives of occupation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **OTHR 5003. Group Dynamics in Occupational Therapy. 3 Credit Hours.**

This course examines teams, social systems, and interdepartmental and intradepartmental relationships in the health care delivery process. A combination of lecture, discussion and training will be used to explore concepts and theories of interdisciplinary group process, group formation, development, and structure and their application within the context of occupational therapy. In assigned groups, students will develop healthcare group protocols to monitor progress, measure outcomes, set goals, and engage in group leadership roles. Students learn to employ constructive feedback to modify and enhance their ability to function as group members and group leaders. This course affords students the opportunity to analyze and apply theories of group dynamics and current literature regarding the use of groups in occupational therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5019.

### **OTHR 5005. Neuroscience Perspectives in Occupational Therapy. 4 Credit Hours.**

This course examines nervous system structures and function to analyze neurobehavioral performance. Lecture, small group, and active learning experiences enhance the analysis and synthesis of neuroscience perspectives with occupational therapy practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **OTHR 5008. Kinesiology Perspectives in Occupational Therapy. 4 Credit Hours.**

This course covers the most important features of gross anatomy including detailed study of bones, muscles, blood vessels, and peripheral nerves. Emphasis is placed on functional anatomy of the extremities, head, neck, and back. Additionally, biomechanical principles of joint and muscle structure and function are applied to occupational performance. Students will learn assessments and techniques most commonly used in occupational therapy practice including goniometry of range of motion (ROM), manual muscle testing (MMT), muscle palpation, and body transfers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 8003.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5005.

**OTHR 5009. Entrepreneurship in Health Professions. 3 Credit Hours.**

The course is designed to introduce students in health professions to entrepreneurship. The goal of the course is to demonstrate the links between knowledge, experience, skills and commercial possibilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 5013. Medical Perspectives in Occupational Therapy. 3 Credit Hours.**

General medicine diagnoses that are leading causes of disability in children, adolescents, adults, and older adults are defined and described. Etiology, signs, symptoms, clinical course, medical management, morbidity, and prognosis are reviewed. The influence of medical pathology on activities of daily living, life routines, social participation, and occupational performance is examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5005.

**OTHR 5014. Person-Environment Dynamics in Occupation. 1 Credit Hour.**

This course will apply theoretical, developmental, and kinesiology perspectives of occupational performance within experiential learning opportunities. This course introduces the synthesizing of perspectives for designing and implementing meaningful activities and occupations for individuals or populations considering the reciprocal and dynamic nature of person-environment interactions. This course introduces activity adaptation and behavioral documentation through participation in meaningful occupation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5001.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5002.

**OTHR 5015. Human Dynamics in Occupational Therapy. 3 Credit Hours.**

This course focuses on the concepts of professional development and group dynamics. An overview of the history, philosophy, ethics, and core values of the profession is discussed as orientation to professional identity. Students learn basic interpersonal and clinical skills in preparation for OT practice. Students are introduced to the principles of the interdisciplinary group process, through task and developmental analysis groups. Students will develop healthcare group protocols to monitor progress, measure outcomes, set goals, and engage and communicate in varied group roles. The course is designed to familiarize the student with the basic principles underlying group behavior, dynamics, and process within clinical contexts, and the evolution of professional role identity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 5019. Theoretical Perspectives in Occupational Therapy. 2 Credit Hours.**

This course examines the theories that guide occupational therapy practice. Through didactic and experiential learning activities, the student analyzes activity, performance, and contextual demands, and analyzes theoretical and clinical reasoning to situations across medical, educational, and community settings for clients, populations, and organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5151.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5002.

**OTHR 5104. Occupational Therapy Practice: Mental Health. 5 Credit Hours.**

This course will explore the history of mental illness in our society as well as the impact of laws on treatment and access to occupational therapy services. Students will examine and build skills in psychosocial interventions used in occupational therapy. Students will examine the theoretical basis, evaluation tools and practice application of individual, group and consultation psychosocial interventions used by occupational therapists. In small groups, students will design and implement evidence based therapeutic activity groups which are developmentally sensitive to social participation as well as adhere to a theoretical base. The role of Occupational Therapy in psychosocial intervention as it relates to public health will also be explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5222.

**OTHR 5105. Occupational Therapy Practice: Children & Youth. 5 Credit Hours.**

This course applies occupational therapy domains and processes for therapeutic interactions with children and youth participating in medical, educational, and community contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5185.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5001 and OTHR 5019.

**OTHR 5123. Occupational Therapy Practice: Assistive Technology. 4 Credit Hours.**

Assistive technology devices and services have the potential to impact the lives of persons with disabilities, resulting in increased independence and participation in their daily activities and to support occupational performance, participation, health and well-being. This course focuses on learning about the various types of assistive technology devices and occupational therapy services including but not limited to evaluation and assessment, selection and training, procurement, legislation and funding. Students gain basic understanding, knowledge and skills of these applications as they pertain to communication, learning, and environmental issues encountered by people with disabilities including wheeled mobility and positioning issues, virtual environments, and telehealth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5286.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5219.

**OTHR 5151. Research I: Evidence-Based Practice in Occupational Therapy. 3 Credit Hours.**

This course emphasizes the use of current research evidence in healthcare evaluation, decision making, and intervention; the process of evidence-based practice. Research 1 provides foundational knowledge that allows students to articulate and interpret the OT professional, appraise new knowledge, contribute new knowledge, and interpret and apply this knowledge to OT practice. An introduction through in-depth examination of research and its relationship to OT practice will be facilitated. Students will gain an understanding of why OT practitioners need to comprehend research, finding and reading evidence, understanding variables as a foundation to evaluating evidence, what statistics reveal and how they are applied in OT practice, validity as an indicator of strong evidence, efficacy indicators for selecting intervention, the role of descriptive and predictive research in understanding conditions and outcomes prediction, qualitative designs for exploration of lived experience, systematic reviews and practice guideline and the integration of evidence from multiple resources.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5019.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5002.

**OTHR 5152. Research II: Design and Methodologies in Occupational Therapy. 2 Credit Hours.**

This course provides an introduction and an in-depth examination of research and its relationship to practice. Students will gain an understanding of theory-based research, methodological considerations in the design of research, ways of evaluating practice, and approaches to understanding and analyzing research results. Based on knowledge obtained in this course, students will critique and synthesize research on a variety of OT-related topics. Course assignments will provide students with the requisite skills for critically reviewing and incorporating research evidence into clinical decision-making. Learning will occur through pre-class readings and online activities, lectures, course activities, discussions, and assignments. Knowledge gained through this course can be used in the evaluation of OT services and in designing and implementing beginning level research projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5105, OTHR 5222.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5151.

**OTHR 5161. Occupational Therapy Service Delivery & Management. 3 Credit Hours.**

The principles of management, leadership and administration in the provision of occupational therapy services will be considered in depth, including principles of organizing, planning, directing, controlling, budgeting and communication. A variety of systems and models will be examined in relation to the marketing and delivery of occupational therapy services, including medical, community, education and social models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5285.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5003.

**OTHR 5185. Occupational Therapy Practice: Fieldwork IA. 1 Credit Hour.**

Students are assigned to a variety of clinical sites with opportunities to observe clients and practitioners, practice clinical skills and professional behaviors. Students will interact with clients across the life span and with various diagnoses and disabilities. Students are supervised by an occupational therapy practitioner or other qualified professional. Students will have the opportunity to apply classroom knowledge and experience that is co-occurring in the OTHR 5105 and OTHR 5222 courses as well as bring fieldwork examples into the classroom for enhanced learning via discussion and assignments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5105, OTHR 5222.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5008, OTHR 5014, and OTHR 5019.

**OTHR 5219. Occupational Therapy Practice: Community and Social Participation. 3 Credit Hours.**

This course explores, examines, and innovates occupational therapy's role in promoting community and social participation. The student gains an understanding of how to embed community and social participation in the therapeutic process, and distinguish the difference between therapy participation and community and social participation. Basic concepts of public health are also examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5285.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5105.

**OTHR 5221. Health & Wellness in the Community. 3 Credit Hours.**

This course explores, examines, and innovates the occupational therapist's role in health and wellness in the community. The student learns how to promote health and wellness programs for individuals, populations, and organizations using contemporary occupational therapy and health behavior models.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5219.



**OTHR 5222. Occupational Therapy Practice: Adults and Older Adults. 5 Credit Hours.**

This course presents an overview of the evaluation process, treatment planning and documentation of occupational therapy services for adults/older adults across the continuum of practice settings. Students will examine the theoretical basis, evaluation tools and occupational therapy interventions for adults/older adults as individuals, groups and populations. Students will design evidence based interventions to promote performance in occupations based on the client's unique needs and environment. Students will gain skills in the utilization of professional resources for evaluation and intervention planning. Through this process, students will gain experiences in integrating theory/frames of reference, activity analysis, theories of human development and human occupation. Students will identify and apply clinical reasoning and therapeutic use of self in evaluation, delivery and documentation of occupational therapy services. Students will also have the opportunity to apply classroom knowledge and experience to the Fieldwork Level I experience that is a co-occurring course as well as bring fieldwork examples into the classroom for enhanced learning via discussion and assignments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5185.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5008, OTHR 5019, and OTHR 8003.

**OTHR 5251. Research III: Implementation in Occupational Therapy. 1 Credit Hour.**

This course is a follow-up to Research II: Proposal Development. Students implement the research study developed in Research II. Data collection sites are established, and data are collected, organized, analyzed, and interpreted in this course under the guidance of a research mentor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5152.

**OTHR 5252. Research IV: Outcomes & Dissemination Promoting Occupational Therapy. 1 Credit Hour.**

This course is a follow-up to Research II: Proposal Development and Research III: Implementation in Occupational Therapy. Students write a research paper that summarizes and presents the information obtained from Research II and III. This information is written as a journal manuscript and is presented to an audience of students and faculty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5251.

**OTHR 5285. Occupational Therapy Practice: Fieldwork IB. 1 Credit Hour.**

Students are assigned to non-traditional fieldwork settings at varied community sites. They have an on-site supervisor, who is not an occupational therapist, but a leader and role model within their community setting. Students also meet weekly with a faculty fieldwork preceptor to assist with professional skill development including, but not limited to, clinical reasoning, reflection, collaboration, and problem-solving. Together they discuss the role and need of occupational therapy in their assigned sites and the factors effecting occupational performance, treatment, and meeting goals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5161, OTHR 5219.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in OTHR 5185.

**OTHR 5286. Occupational Therapy Practice: Fieldwork IC. 1 Credit Hour.**

Students are assigned to a variety of clinical sites with opportunities to observe clients and practitioners, practice clinical skills and professional behaviors. Students interact with clients across the lifespan and with various diagnoses and disabilities. Students are supervised by an occupational therapy practitioner or a Level II occupational therapy student.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in OTHR 5285.

**OTHR 5287. Intensive Occupational Therapy Practice: Fieldwork IIA. 1 to 9 Credit Hour.**

This course entails three months of full-time supervised fieldwork experience with the opportunity to treat individuals with a variety of diagnoses across the lifespan and to complete a professional reasoning master's project. Fieldwork Level II is an in-depth experiential learning experience that is critical to occupational therapy education. In supervised settings, students apply their academically acquired body of knowledge in varied settings where occupational therapy services are provided. A facilitated professional reasoning experience requires students to examine the application of theories and evidence to support evaluation and intervention in the occupational therapy process. A master's project culminates in a needs analysis and project implementation serving the needs of the clients or setting of the fieldwork experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- (except where noted) in OTHR 5123, OTHR 5222, and OTHR 5286 (P or higher)

**OTHR 5288. Intensive Occupational Therapy Practice: Fieldwork IIB. 9 Credit Hours.**

This course entails three months of full-time supervised fieldwork experience with the opportunity to treat individuals with a variety of diagnoses across the lifespan and to complete a professional reasoning master's project. Fieldwork Level II is an in-depth experiential learning experience that is critical to occupational therapy education. In supervised settings, students apply their academically acquired body of knowledge in varied settings where occupational therapy services are provided. A facilitated professional reasoning experience requires students to examine the application of theories and evidence to support evaluation and intervention in the occupational therapy process. A master's project culminates in a needs analysis and project implementation serving the needs of the clients or setting of the fieldwork experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in OTHR 5287.

**OTHR 5301. Professional Development and Learning in OT Education. 1 Credit Hour.**

This course will explore professional development in occupational therapy practice and post-professional education. Students will develop professional and academic plans in relation to curricular development, adult learning, professional and scientific writing, and professional association engagement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5019.

**OTHR 8002. Clinical Skills I: Perspectives in Occupational Therapy. 2 Credit Hours.**

In this course, an overview of the history, philosophy, ethics, and core values of the profession is discussed as orientation to professional identity. Students are also introduced to knowledge of the social determinants of health for persons, groups, and populations with or at risk for disabilities and chronic health conditions. Students are introduced to the principles of evidence-based practice, clinical reasoning, and ethical decision making. Students are familiarized with the use of documentation procedures to set goals, monitor progress, and measure outcomes. Basic interpersonal and clinical skills in preparation for OT practice will also be learned.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8003. Clinical Skills II: Fundamentals of Practice. 2 Credit Hours.**

This course is designed to familiarize students with the fundamental skills that are required in traditional, emerging, and community-based practice settings. Students will develop interview and observation skills, learn basic health monitoring skills, and acquire fundamental skills for supporting clients. Students will continue to develop evaluation, documentation and goal-setting skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5008.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5005 and OTHR 8002.

**OTHR 8100. Topics in Occupational Therapy Specialty. 1 to 3 Credit Hour.**

Advanced knowledge from academic, administrative, and/or clinical management perspectives in occupational therapy area of specialty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**OTHR 8104. Clinical Skills III: Specialty Skills in Occupational Therapy. 2 Credit Hours.**

In this course, students will develop a basic understanding of procedures and intervention strategies associated with the application of physical agent modalities and will review state regulations regarding the use of these modalities. Students will also be introduced to the fundamentals of orthotic design and assessment in preparation for practice. Students will have the opportunity to develop hands-on skills in an interactive laboratory to apply, fit and train orthotic devices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 8003 and OTHR 5222.

**OTHR 8105. Clinical Skills IV: Professional Reasoning in Occupational Therapy. 2 Credit Hours.**

Through the use of case studies representing traditional, emerging, and community-based practice areas, students will apply previously acquired knowledge to the clinical reasoning process. Students will describe clinical reasoning processes used to develop person, group, and population intervention plans and strategies for implementation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 5123.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 8104.

**OTHR 8107. International Health Perspectives in Occupational Therapy. 2 Credit Hours.**

This course focuses on the major factors influencing global health issues and the interdependence of the industrialized and developing world in addressing health problems from a global perspective. Commonality and differences in disease burden between the two will be emphasized. Students will also be aware of many of the major health issues affecting developing countries and the opportunities and problems that may be encountered in various health-related endeavors. Health system policy responses will also be considered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5161.

**OTHR 8121. Environmental Adaptations. 3 Credit Hours.**

This course has two modules: 1) Ergonomics: the student learns the principles of ergonomics from both pre-and post-injury perspectives and will apply these principles in assessment and recommendations for people with and without disabilities. 2) Computer access and learning software address a range of computer access adaptations and software for the differently-abled client in the home, educational setting, and work environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8122. Studies in Assistive Technology. 3 Credit Hours.**

The course has three modules: 1) Introduction to the range and scope of assistive technology for work, school, and play. Using a cross disability perspective, students learn about high and low tech devices and solutions for functional challenges across settings. 2) Principles and technologies for postural control, deformity, and pressure management as well as seating comfort. Types of switches and switch activation for mobility are explored. 3) Addresses major public funding sources for financing technology including medical assistance, special education, and vocational rehabilitation as well as the process for obtaining and implementing assistive technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8131. Assessment Tools for Pediatric Occupational Therapy Practice. 3 Credit Hours.**

Hands-on comparison and analysis of selected assessment tools common in pediatric practice are expanded to goal setting and treatment planning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8132. Occupational Therapy Intervention in Pediatrics. 3 Credit Hours.**

Concepts in occupational therapy intervention in pediatrics are explored and related to treatment planning and intervention procedures in the varying contexts in which pediatric occupational therapists are employed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8133. Family Centered Care. 3 Credit Hours.**

Students have the opportunity to explore family systems, parent/caregiver professional partnerships, family centered services, family centered teams, and interagency collaboration. They explore models of self help, empowerment, and service delivery as well as techniques for eliciting and developing family service plans and interagency networking.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8134. Developmental Issues in the Early Years: An Occupational Therapy Perspective. 3 Credit Hours.**

Current social, cultural, legal, and economic trends affecting developmental dysfunction and occupational therapy intervention in physical, sensory, perceptual, cognitive, and psychosocial areas, from neonatal to adolescence are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8141. Concepts of Gerontological Rehabilitation I. 3 Credit Hours.**

An introduction to the fields of geriatrics and gerontology, with special emphasis given to the review of theoretical perspectives and research in gerontological rehabilitation, as well as biological, social, medical, psychological/psychiatric, and environmental factors that influence the aging process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8162. Advanced Management in Health Related Service Delivery. 3 Credit Hours.**

An examination of management, administrative, economic, legal, and social issues as they impact upon the provision of occupational therapy services and other health related professions. This course illuminates the unique facet health care occupies within the free market and how occupational therapy and other health related services fit within that definition. Particular emphasis will be placed upon economics and the application of these concepts in optimizing service delivery.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8172. Neurobiological Foundations of Sensory Integration. 3 Credit Hours.**

The development of the theory of sensory integration is presented. The neurobiological foundations of the theory are examined in light of current research. The application of this information to the therapeutic intervention is addressed and demonstrated through videotapes and practice sessions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8173. Sensory Integration and Praxis Test (SIPT) Administration and Interpretation. 3 Credit Hours.**

The standardization methods, reliability, and validity of the 17 tests of the SIPT battery are analyzed. The mechanics of each test are presented and practiced in a supervised setting. Students are individually observed in test administration. The testing of sensory processing as one aspect of sensory integration is included. The interpretation of findings, report writing and establishment of treatment goals are practiced. Gathering evidence of sensory integration and sensory processing problems based on a variety of measurement instruments is also addressed. Students are eligible for Sensory Integration International certification on completion of OTHR 8172 and OTHR 8173 and successful completion of the SIPT certification examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8174. Sensory Integration Practice Applications. 3 Credit Hours.**

The application of sensory integration and sensory processing principles to occupational therapy intervention are presented. Techniques used in various settings and with various conditions are addressed and demonstrated through videotapes, clinic visits, practice sessions, and case presentations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8206. Clinical Skills V: Clinical Leadership. 2 Credit Hours.**

Students will explore leadership theories applicable to a variety of practice settings. Through self-assessment, self-reflection, and didactic and experiential learning activities, students will identify personal skills and behaviors that will enable them to become leaders in clinical practice, academia, and/or research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 8105.

**OTHR 8286. Doctoral Capstone in Occupational Therapy I: Topic Development. 2 Credit Hours.**

Students will explore the doctoral capstone, become familiar with the goals, processes and procedures, and anticipated outcomes of project completion, and reflect on the importance of professional development. Through this course, students will explore theories of change in preparation to address new, evolving, or longstanding challenges to the health and wellness of persons, groups, and populations and identify a topic of interest and one or more focus areas as outlined by the Accreditation Council for Occupational Therapy Education (ACOTE) for their project. Using previously acquired knowledge, they will develop a research question to guide their literature review and identify a theoretical model to ground their capstone project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 5152.

**OTHR 8287. Doctoral Capstone in Occupational Therapy II: Capstone Site and Project Proposal. 3 Credit Hours.**

This course will provide students with an in-depth understanding of the needs assessment and program evaluation processes related to their topic of interest. Students will complete a capstone proposal outlining the components of their capstone project and how the project will be integrated into the capstone site. Additionally, students will finalize a professional development plan establishing goals for professional development to be achieved through completion of their capstone project, methods of attainment, and outcome criteria.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 8286.

**OTHR 8288. Doctoral Capstone in Occupational Therapy III: Capstone Experience. 9 Credit Hours.**

In conjunction with OTHR 8289 and with the support of faculty and site mentors, students will engage in on-site, actionable components of their individual capstone projects including completion of a needs assessment, refinement of a plan for implementation of their capstone project, and implementation and evaluation of their plan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 8289.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 8287.

**OTHR 8289. Doctoral Capstone in Occupational Therapy IV: Implementation and Evaluation. 3 Credit Hours.**

Using information gathered in OTHR 8288, students will compile and document the results of site and project specific needs assessment, refine and finalize their project plan, document the implementation process of their plan, and compile and document project evaluation results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** OTHR 8288.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 8287.

**OTHR 8291. Doctoral Capstone in Occupational Therapy V: Analysis and Dissemination. 3 Credit Hours.**

In this course, students will analyze, interpret, and document project evaluation results gathered during OTHR 8288 and OTHR 8289 and develop sustainability plans to maintain and/or build on their work. Students will identify appropriate venues for the dissemination of their capstone project and its results and prepare the necessary documents or proposals for these venues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P (except where noted) in OTHR 8288 and OTHR 8289 (B- or higher)

**OTHR 8509. Leadership in the Health Professions: The Art and Science of Influence. 3 Credit Hours.**

Health professionals, both clinical and academic, have the responsibility to exercise leadership in the advocacy for safe, effective, and quality health services. The accountability for this leadership is shared by all health professionals at all organizational levels. The competitive health care market presents professionals with a variety of leadership challenges. Artful and evidence-based leadership is a critical element for all those who aspire to be thought leaders/entrepreneurs in health professions education, health-related research, health policy and practices and the delivery of health care. This online course is designed to introduce students to the process of leadership: a process by which influence is exercised. A variety of active learning techniques and case study analyses will be used to explore theoretical concepts of leadership and the practical application of these concepts into daily life. An important outcome of the course is the development of a leadership portfolio that will contain items such as case studies, class presentations, and a personal leadership plan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8511. Clinical Education and Fieldwork Supervision. 3 Credit Hours.**

This course allows occupational therapists who have been, or who would like to be involved with clinical education, to acquire foundational knowledge within the triad of domains comprising clinical fieldwork education: teaching and learning, the mentoring/supervisory relationship, and administration. Students evaluate selected learning theories and learning style assessments, are introduced to models of supervision, and have an opportunity to apply them as part of a final course project. An administrative component provides opportunities to design site-specific goals and to explore available resources for establishing and improving clinicians' respective fieldwork programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8512. Studies in Outcome Measures and Analysis. 3 Credit Hours.**

This course will explore outcome measurement theories and practices, and the development of competence in the application of these concepts to evidence-based clinical practice and program management. Analysis of outcome measures is the primary focus in the second half of the course including applied statistical procedures. Outcome measurement, analysis, and program evaluation is core to the practice of Occupational Therapy. Evaluation of the results of clinical interventions and overall client reaction has long been held as a core value of occupational therapy practice. Current international health care trends reflect the concepts of participation in meaningful life experiences within the environmental and sociocultural context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in OTHR 8513.

**OTHR 8513. Evidence-Based Practice and Clinical Research. 3 Credit Hours.**

Students will explore the most appropriate research designs and methodologies for clinical research and apply these in their clinical practice area. They will implement the four main steps of evidence-based practice including developing a clear clinical question related to client problems, completing a search of the literature, critiquing the evidence, and applying findings to clinical practice. The implications for evidence-based practice in the profession of occupational therapy will be explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8514. Occupational Based Theories and Participation. 3 Credit Hours.**

This seminar traces the historical foundations of occupation as the central paradigm of the profession. It explores literature across professions which explicate the underlying principles including foundations laid by the Occupational Behavior paradigm and the Model of Human Occupation, the Models of Occupational Adaptation, Ecology of Human Performance, and Person - Environment - Occupation in their usefulness in addressing the issues in the disabled and well populations. Principles of Occupational Science are explored and applied as a foundation for these approaches. The concept of participation is discussed as a key component of health according to the International Classification of Functioning (ICF) (World Health Organization) and a major outcome of the Occupational Therapy Practice Framework. It includes the importance, performance, and satisfaction with the involvement in life roles. The student examines environmental factors that facilitate physical access, improve psychological awareness and empowerment, and utilize advocacy for positive social change across the lifespan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OTHR 8901. Capstone Project. 3 Credit Hours.**

Each student completes a capstone project while enrolled in the course. The capstone project reflects the goals of the program as well as the goals of the student as structured by the student's learning objectives as directed and informed by the development of a professional portfolio. The advisor recommends resources and provides guidance within a class forum. The project must be founded in evidence-based practice and either be supported by evidence in peer-reviewed literature or provide outcomes identifying the effectiveness of the project. Students start exploring the literature for their projects in the Evidence-Based Practice and Clinical Research course and explore possible outcome measures for the project if appropriate in the Studies in Outcome Measures and Analysis core course. The field study may provide opportunities for implementation of their project or clinical experiences in areas related to the project. The results of the capstone project are disseminated to the appropriate audiences through presentations, demonstrations, publications, and/or incorporation into a program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** (OTHR 8512, OTHR 8513, OTHR 8514, and OTHR 9089)

**OTHR 8902. Capstone Project Inquiry. 1 Credit Hour.**

This course is the first in the capstone series that focuses on identifying an occupational therapy focused clinical problem and gaining skills to comprehensively understand the literature surrounding the area of interest. The course will include the development of a capstone question and literature review for an area of development in occupational therapy. Each student will have a faculty mentor to guide the capstone development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**OTHR 8903. Capstone Project Proposal. 1 Credit Hour.**

The second capstone series course will evaluate a research methodology or program development plan based on the first capstone series inquiry. Directed readings, individualized sessions, research and evaluation ethics, institutional research board protocol with a faculty advisor will culminate in a proposal presentation in preparation for the third capstone implementation course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in OTHR 8902 and OTHR 8512.

**OTHR 8904. Capstone Project Proposal and Implementation. 1 Credit Hour.**

The second capstone series course will evaluate a research methodology or program development plan based on the first capstone series inquiry. Directed readings, individualized sessions, research and evaluation ethics, institutional research board protocol with a faculty advisor will culminate in a proposal presentation in preparation for implementation. The course will culminate in data collection and analysis of research or program evaluation data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in OTHR 8902.

**OTHR 8905. Capstone Project. 1 Credit Hour.**

The third capstone series course will conclude the series with future implications and dissemination of capstone results. The course will focus on capstone project results and its integration and implication for occupational therapy practice. Directed readings and individualized sessions with a faculty advisor will culminate in dissemination of the capstone project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in OTHR 8904.

**OTHR 9082. Independent Study. 1 to 6 Credit Hour.**

Focus is on furthering the student's knowledge and skills in a specialized area of individualized study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**OTHR 9089. Field Study and Professional Portfolios. 3 Credit Hours.**

This is a mentored field study experience. The field study requires the student to complete 4 weeks or 160 hours of mentored experience with experts in the area of exploration or development. The field study is directed and informed by the student's leadership objectives and are reflected in a portfolio required for degree completion. Master's clinicians, researchers, or educators will be identified by the student and the faculty advisor for the field study. The mentor does not have to be an occupational therapist although must specialize in an area related to the profession. The student along with the mentor or mentors and the faculty advisor identify specific goals for the field study related to the student's specialty practice area. The field study may focus on expanding specialty clinical skills, collecting data for the capstone project, or expanding skills related to clinical education. As part of this course, students participate in a professional portfolio seminar with a Temple faculty member where they learn the uses, types, and content of professional portfolios in order to best develop their own portfolio reflecting learning experiences within the doctoral program. Students learn to evaluate and organize the evidence of learning related to their experiences with the field study, coursework, and the capstone project. The end product of the course is the completion of at least 4 weeks or 160 hours of mentored experience, along with an extensive portfolio and e-portfolio reflecting a professional development plan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Ophthalmology (OPHT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**OPHT M164. Intro to Ophthalmology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**OPHT M322. Career Exploration of Ophthalmology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**OPHT M620. Ophthalmology. 0 Credit Hours.**

**Course Attributes:** M2



**OPHT M630. Advanced Ophthalmology. 0 Credit Hours.**

This course is for students applying for ophthalmology residency. Students will be assigned to work closely with 1-2 faculty in the clinical setting.

**Co-requisites:** OPHT M322, OPHT M620.

**Repeatability:** This course may be repeated for additional credit.

## Oral Biology (ORBG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ORBG 5001. Introduction to Dental Assisting. 2 Credit Hours.**

Designed to provide the student with an introduction to the dental profession, the dental team and the roles and responsibilities of each member of the team, infection control procedures, sterilization and patient confidentiality. Students will also receive basic knowledge of dental terminology, anatomical structures of the oral cavity, and classification of occlusion. Emphasis is placed on applying information to the clinical setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 5002. Chairside Dental Assisting. 3 Credit Hours.**

Designed to give the student an introduction to dental terminology, medical-dental histories, dental instruments, charting, oral evacuation, instrument transfer and procedure specific tray set-ups. Emphasis is placed on utilization of four handed dentistry skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 5004. Dental Radiology Lecture and Lab. 2 Credit Hours.**

Designed to provide the student with basic knowledge of the principles of radiology and radiographic techniques including the principles and methods employed in the paralleling technique and radiographic interpretation. Emphasis is placed on the practice of exposing, processing, mounting, and interpreting intraoral radiographs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 5005. Dental Anatomy. 1 Credit Hour.**

Designed to provide students a basic knowledge of dental terminology, anatomical structures of the oral cavity, head and neck region, classification of occlusion and oral pathology of the head and soft tissue.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8021. Microbiome. 3 Credit Hours.**

Course will focus on the biology, ecology, and cell behaviors in the human microbiome in the whole body with a specific emphasis on the oral cavity. Course will also cover the epigenetic changes that may occur in the microbiome and the range of health issues such as obesity, infections, and risk of developing dental and oral mucosal diseases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8022. Microbiome Techniques. 2 Credit Hours.**

This course will cover topics related to laboratory techniques employed to study microorganisms in general and the human microbiome in particular. The topics will range from basic techniques including microscopy, cultivation and biochemical and immunological identification to advanced molecular techniques including nucleic acid amplification, hybridization and sequencing, with particular focus on microbiome analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8023. Craniofacial Bone Biology and Maxillofacial/Dental Orthopedic Care. 2 Credit Hours.**

This introductory course will review bone biology and how bone develops and remodels in orthodontic and orthopedic care.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8024. Regeneration of Bone and Dental Hard Tissues. 1 Credit Hour.**

This course will focus on dentin and bone regeneration research already being conducted at the dental school and Temple University Center for Bioengineering Research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8025. Temporomandibular Joint Biology. 2 Credit Hours.**

This course will cover the anatomy, mechanics, and function of the temporomandibular joint (TMJ) and associated muscles and ligaments. The course will also cover the dysfunctions commonly diagnosed in dental practice and how they may be manifested in the operation of the TMJ complex.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8026. Neuroscience of Pain. 2 Credit Hours.**

This course will focus on the understanding of the biology of pain and how the transmission of pain signals throughout the central and peripheral nervous system. The course will also cover the mechanisms involved in determining pain thresholds and the myriad of psychological responses to pain sensations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8027. Biology of Drug Delivery Mechanisms. 2 Credit Hours.**

This course will focus on how the oral cavity and salivary glands can be used as bioreactors that may be used to deliver drugs, genes, proteins and other molecules to treat a variety of oral and systemic conditions. The course will also cover the mechanisms involved in determining pain thresholds and the myriad of psychological responses to pain sensations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8028. Basic and Advanced Statistical Methods. 3 Credit Hours.**

An introduction to statistical theory and applied methods, including modeling techniques, to analyze dental data. The course will describe the impact of clustering effects of data points in the oral cavity; correction for design effects; methods of analysis of different dental outcomes; and appropriate statistical modeling methods useful in contemporary studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8029. Behavioral Change Theories and Practice. 2 Credit Hours.**

This course will review and apply selected behavioral change theories in addressing common behavioral problems including addiction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8031. Biomaterials. 2 Credit Hours.**

Developing materials for use in dentistry and medicine is a challenging interdisciplinary process and requires an understanding of material bulk and surface properties, the various biological responses to materials, the clinical context of their use, manufacturing processes, cost, sterilization, packaging, and regulatory issues. This course is designed to introduce students to the various classes of biomaterials in use, their analysis and regulation, and examination of some of their applications in selected subspecialties of dentistry and medicine.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8032. Practical Clinical Practice. 3 Credit Hours.**

Students will be assigned as dental assistants, quality evaluators, or patient advocates in the dental school clinics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in ORBG 5001, ORBG 5002, ORBG 5004, and ORBG 5005.

**ORBG 8034. Advanced Practical Clinical Practice. 3 Credit Hours.**

This is an advanced course where students will continue to be assigned as dental assistants, quality evaluators or patient advocates throughout the dental school clinic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8035. Introduction to Orthodontics. 2 Credit Hours.**

The objective of the course is to introduce the post baccalaureate student to the processes of normal craniofacial growth and development in order to recognize and identify deviations from normal. The course emphasizes developmental dentistry, application to clinical orthodontics and postnatal craniofacial growth. Foundation knowledge in orthodontic diagnosis will be developed to allow systematic description of clinical orthodontic problems, orthodontic diagnosis and generation of an orthodontic patient clinical problem list.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8036. Molecular Technology for Translation to the Dental Clinic. 2 Credit Hours.**

Molecular Biology research holds great promise for translation to clinical Medicine and Dentistry. This course is a survey of molecular technology along with its contemporary applications to clinical diagnosis and treatment. The course consists of didactic presentations to review basic concepts and student group discussions to address the importance of new technology for clinical applications, particularly in Dentistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8037. Science of Taste Sensation and Relation with Oral Conditions. 1 Credit Hour.**

The "taste" is one of the chemosensory senses (taste, smell, and chemesthesis (or chemical feel, including burn from hot chili peppers and cooling from menthol)). Taste receptors convert gustatory stimuli into signals that sensory afferent fibers could transport to the brain where we have sensory experience of foods and beverages. This course is designed to give students a basic understanding of the anatomy, physiology, and biochemistry of this process. This course is intended to give students a working understanding of the taste cells and taste sensation systems important in dentistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8038. Inflammation and Oral Disease. 2 Credit Hours.**

This course will review all aspects of the inflammatory processes and how they relate to pulpal, periapical and periodontal disease. The course topics will include surveys of the cells and the chemical mediators responsible for the inflammatory processes. In addition, as the primary initiators of the body's inflammatory systems, the organisms comprising the microbial world will be surveyed in order to define the characteristics that distinguish each of the different microbiological groups, including those associated with pulpal, periapical and periodontal inflammatory disease. Finally, the inflammatory manifestations exhibited in oral diseases (pulpal inflammation, periapical periodontitis, and marginal periodontitis) will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Postbaccalaureate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8039. Introduction to Dental Biochemistry and Oral Health Sciences. 3 Credit Hours.**

The Introduction to Dental Biochemistry and Oral Health Sciences course is designed for postbaccalaureate and dental school students. The main lecture part of this course is designed to be an introduction to biochemical compounds, processes, and concepts for students in the dental and related health professions. The broad goal of the teaching of introductory dental biochemistry is to make students understand the scientific basis of the life processes at the biochemical and molecular level and to orient them towards the application of the knowledge acquired in solving dental-oriented clinical problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 8042. Introduction to Dental Biological and Oral Health Sciences. 3 Credit Hours.**

The Introduction to Dental Biological and Oral Health Sciences course is designed for postbaccalaureate and dental school students. It will provide students advanced understanding and appreciation of current topics in molecular and cellular biology, while developing skills in critical thinking. The course will provide strong information about application of contemporary biology knowledge and techniques to understand molecular and biological background of human oral health and diseases. Course topics include classical and contemporary issues of biological and molecular techniques related to dental clinics such as stem cells and tissue engineering. The roles of recent progress made in biology and related disciplines in the diagnosis and treatment of oral diseases and oral health issues are examined. In addition, students will gain knowledge in the application of molecular and biological techniques in diagnosis of human oral health and diseases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**ORBG 9885. Pre-clinical Dental Experience for the Kuwaiti Program I. 6 Credit Hours.**

This course is for selected post-graduate students enrolled in the Kuwaiti Program at Temple University Kornberg School of Dentistry. Prior to participation in assigned clinics, the resident's knowledge and skills in the disciplines of direct and indirect restorative dentistry, prosthodontics, and endodontics are assessed. Needed review or update of skills and knowledge are obtained with either assigned exercises in the pre-clinic laboratory, assigned assisting in the AEGD clinic, or with assigned literature reviews.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**ORBG 9886. Pre-clinical Dental Experience for the Kuwaiti Program II. 6 Credit Hours.**

This course is for selected post-graduate students enrolled in the Kuwaiti Program at Temple University Kornberg School of Dentistry. Prior to participation in assigned clinics, the resident's knowledge and skills in the disciplines of direct and indirect restorative dentistry, prosthodontics, and endodontics are assessed. Needed review or update of skills and knowledge are obtained with either assigned exercises in the pre-clinic laboratory, assigned assisting in the AEGD clinic, or with assigned literature reviews.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Oral Health Sciences (OHSC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**OHSC 8011. Molecular Oral and Craniofacial Biology. 1 Credit Hour.**

Basic concepts of physiology, biochemistry, and cell biology related to the oral cavity and craniofacial complex are explored. Topics include connective tissue biology, the role of saliva in health and disease, muscle function, taste, smell, and other sensory functions, with emphasis on current research. These seminars are designed for first-year students in postdoctoral programs in which advanced courses are combined with specialty training. The course outlines scientific information about molecular biology that contributes to our understanding of normal structures and disease processes. Wherever possible, it indicates how this information is useful or impinges on clinical dentistry. This course presupposes a broad background in the basic sciences and interrelates much recently acquired scientific information about the oral cavity that has not been attempted at the predoctoral level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8012. Advanced Dental Pharmacology and Therapeutics. 1 Credit Hour.**

Pharmacotherapeutics of drugs most often used in dentistry, with emphasis on mechanisms, interactions, and effects of drugs used in prevention, diagnosis, and treatment of oral diseases, and drugs used for systemic diseases that may influence the progression or management of oral diseases.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8013. Introduction to Evidence-Based Dentistry. 1 Credit Hour.**

Contemporary topics and research presentations on oral and craniofacial biology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8014. Clinical Anatomy of the Head and Neck. 1 Credit Hour.**

Growth and development of the head and neck in relation to general gross anatomy; surgical anatomy of the head and neck region with neuroanatomic studies of cranial nerve anatomy, function and pathology; temporomandibular joint structure, function and dysfunction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8015. Research Methodology and Study Design. 1 Credit Hour.**

Fundamental principles involved in planning, conducting, analyzing, and reporting of scientific research studies, including classification of study designs, hypothesis testing, clinical trial requirements, protocol and grant preparation, scientific writing, analysis and interpretation of data, and approaches to critical evaluation of the scientific literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8016. Cases in Oral and Maxillofacial Pathology. 1 Credit Hour.**

Students are taught to formulate appropriate clinical and radiographic differential diagnoses for common soft and hard tissue abnormalities of the oral and perioral region via case based discussions. Students receive instruction in the management of patients with common oral mucosal diseases. Indications for patient referral to medical or dental specialists for diagnostic evaluation or disease management are presented. Critical thinking is emphasized in case-based modules. During the case based discussions, students will be asked to describe the lesions using appropriate terminology, offer a prioritized differential diagnosis, suggest a diagnostic plan and recommend management strategies for the entities discussed. The use of a SOAP note format for documenting problem focused patient encounters in oral and maxillofacial pathology will be applied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8017. Oral Microbiology and Immunology. 1 Credit Hour.**

Study of microorganisms and host responses important in oral microbial ecology, oral infectious processes, and the pathogenesis of dental caries, periodontal diseases, dental implant infections, endodontic infections, oral mucosal lesions, and dental focal infections at non-oral body sites.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8018. Biostatistics. 1 Credit Hour.**

Introduction to statistical analysis as it applies to biomedical research, including descriptive and inferential statistics. Topics include summarizing and displaying data, theory of measurements and distribution, significance testing, and basic concepts of probability and association.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8019. Advanced Oral and Maxillofacial Radiology. 1 Credit Hour.**

Applications of digital dental radiography, panoramic radiology, tomographic imaging for dental implants, computed tomography (CT), and magnetic resonance imaging (MRI); differential interpretations of clinically significant oral and maxillofacial lesions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8033. Bioethics and Critical Thinking in Dentistry. 1 Credit Hour.**

This course introduces dental residents to the theoretical and practical foundations of bioethics. After an introduction to the history of bioethics and its theories, tools, and strategies for identifying and resolving ethical dilemmas, students will critically explore four key components of contemporary dental ethics: 'Ethics at the Chairside' covering topics such as confidentiality, truth telling, and cultural competency; 'Oral Health Disparities' which introduces the social determinants of health into the oral health equation; 'Research and Industry' designed to teach residents to critically think about conflicts of interest and professionalism; and 'Policy Perspectives' which covers oral health and social justice and the relationships between dental practitioners, health care reform, and oral health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8041. Evidence-Based Health Care. 2 Credit Hours.**

Evidence-based health care has been defined as the practice of health care that integrates the best available evidence with clinical experience and what a patient prefers in making clinical decisions. It is vital that all clinicians are trained to adopt a constructively and professionally critical mindset in making their own assessments of published work. The Evidence-Based Health Care course is designed to provide foundation knowledge and practical experience in five main domains: 1) Asking evidence-based questions (framing an answerable question from a clinical problem); 2) Searching for the best evidence; 3) Reviewing and critically appraising the evidence; 4) Applying this information in a way to help the clinical practice and 5) Managing existing data and conducting basic statistical analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8056. Oral and Maxillofacial Pathology for Non-Clinicians. 1 Credit Hour.**

Students learn to formulate differential diagnoses for common soft and hard tissue abnormalities of the oral and perioral region via case-based discussions. Students receive instruction in the management of patients with common oral mucosal diseases. Indications for patient referral to medical or dental specialists for diagnostic evaluation or disease management are presented. Critical thinking is emphasized in case-based modules. The use of a SOAP note format for documenting problem-focused patient encounters in oral and maxillofacial pathology will be applied.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8059. Oral Radiology for Non-Clinicians. 1 Credit Hour.**

This course provides the information and experience necessary for non-clinical graduate students to be contemporary with the concepts and practices of oral and maxillofacial radiology. Clinical applications, position guidelines, anatomy, and imaging findings of cone-beam computed tomography (CBCT), the latest development of three dimensional dental image, will be presented. Diagnostic imaging for dental implants and other advanced oral and maxillofacial imaging systems, such as conventional CT and magnetic resonance imaging (MRI) will be demonstrated. Differential interpretations of common oral and maxillofacial lesions (radiolucencies and radiopacities) are discussed.

**Repeatability:** This course may not be repeated for additional credits.

**OHSC 8111. Endodontology Clinical Rotation. 2 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program. Participation in the course requires prior approval by the course director and clinic supervisor. Master's students will participate in a clinical rotation to observe clinical operations and delivery of patient care, and may include chairside assisting for students with appropriate qualifications. Master's students on the Clinical Internship track with appropriate qualifications may be considered on a case-by-case basis to participate in limited direct patient care at the sole discretion of the department chair and program director. A wealth of clinical information and learning can be gleaned from this experience, as well as establishing a level of familiarity and comfort with clinical and logistical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8112. General Dentistry Clinical Rotation. 2 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program. Participation in the course requires prior approval by the course director and clinic supervisor. Master's students will participate in a clinical rotation to observe clinical operations and delivery of patient care, and may include chairside assisting for students with appropriate qualifications. Master's students on the Clinical Internship track with appropriate qualifications may be considered on a case-by-case basis to participate in limited direct patient care at the sole discretion of the department chair and program director. These clinics include pre-doctoral general dentistry clinic and the Advanced Education in General Dentistry (AEGD) program, a CODA-recognized advanced training program beyond a dental degree. A wealth of clinical information and learning can be gleaned from this experience, as well as establishing a level of familiarity and comfort with clinical and logistical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8113. Oral Surgery Clinical Rotation. 2 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program. Participation in the course requires prior approval by the course director and clinic supervisor. Master's students will participate in a clinical rotation to observe clinical operations and delivery of patient care, and may include chairside assisting for students with appropriate qualifications. Master's students on the Clinical Internship track with appropriate qualifications may be considered on a case-by-case basis to participate in limited direct patient care at the sole discretion of the department chair and program director. A wealth of clinical information and learning can be gleaned from this experience, as well as establishing a level of familiarity and comfort with clinical and logistical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8114. Orthodontics Clinical Rotation. 2 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program. Participation in the course requires prior approval by the course director and clinic supervisor. Master's students will participate in a clinical rotation to observe clinical operations and delivery of patient care, and may include chairside assisting for students with appropriate qualifications. Master's students on the Clinical Internship track with appropriate qualifications may be considered on a case-by-case basis to participate in limited direct patient care at the sole discretion of the department chair and program director. A wealth of clinical information and learning can be gleaned from this experience, as well as establishing a level of familiarity and comfort with clinical and logistical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8115. Pediatric Dentistry Clinical Rotation. 2 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program. Participation in the course requires prior approval by the course director and clinic supervisor. Master's students will participate in a clinical rotation to observe clinical operations and delivery of patient care, and may include chairside assisting for students with appropriate qualifications. Master's students on the Clinical Internship track with appropriate qualifications may be considered on a case-by-case basis to participate in limited direct patient care at the sole discretion of the department chair and program director. A wealth of clinical information and learning can be gleaned from this experience, as well as establishing a level of familiarity and comfort with clinical and logistical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8116. Periodontology Clinical Rotation. 2 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program. Participation in the course requires prior approval by the course director and clinic supervisor. Master's students will participate in a clinical rotation to observe clinical operations and delivery of patient care, and may include chairside assisting for students with appropriate qualifications. Master's students on the Clinical Internship track with appropriate qualifications may be considered on a case-by-case basis to participate in limited direct patient care at the sole discretion of the department chair and program director. A wealth of clinical information and learning can be gleaned from this experience, as well as establishing a level of familiarity and comfort with clinical and logistical operations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8150. Fundamentals of General Dentistry. 1 Credit Hour.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program and will present lectures on the various topics in general dentistry organized by discipline. Both general dentists and faculty members with advanced education certificates will lecture on their specific area of interest.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8151. Advanced General Dentistry. 2 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program and will present lectures on advanced topics in general dentistry and medicine. Both general dentists and faculty members with advanced education certificates will lecture on their specific area of interest. Students will present lecture topics on the medical implications in dentistry. Lecture topics will be of either greater depth or higher degree of specialization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8152. General Dentistry Literature Review. 1 Credit Hour.**

This course is designed to develop a knowledge of pertinent topics in general dentistry in addition to an understanding of how to assess the validity of scientific articles published in peer-reviewed professional journals. Specific topics are assigned for each seminar with relevant articles assigned prior to each class. Articles are reviewed by students and the course is directed by a faculty member. Individual students will review and report on each article. The review will be a synopsis of each article identifying all pertinent points discussed. The student must determine the clinical significance of each article and how it affects their clinical practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8153. General Dentistry Implant Literature Review. 1 Credit Hour.**

This course is designed to develop a knowledge of pertinent topics in Implantology for the general dentist, in addition to an understanding of how to assess the validity of scientific articles published in peer-reviewed professional journals. Specific topics are assigned for each seminar with relevant articles assigned prior to each class. Articles are reviewed by students and the lecture is directed by a faculty member. Individual students will review and report on each article. The review will be a synopsis of each article identifying all pertinent points discussed. The student must determine the clinical significance of each article and how it affects their clinical practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8250. Periodontology and Prosthodontic Treatment Planning. .5 Credit Hours.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program and will present clinical cases for discussion on advanced topics in the unique interaction between periodontology and oral implantology and prosthodontics. Basic science and evidence-based treatment prescriptions will be used at each session to support the clinic case scenarios presented. The course will teach how data collection will support a diagnosis, and how treatment prescriptions will address a diagnosis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 8350. Interdisciplinary Treatment Planning. 1 Credit Hour.**

This course is intended for students enrolled in the Master of Science in Oral Health Sciences program and will present clinical cases for discussion on advanced topics in dentistry across all dental specialties/disciplines. Basic science and evidence-based treatment prescriptions used at each session to support the clinic case scenario presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**OHSC 9991. Research in Oral Health Sciences. 1 to 6 Credit Hour.**

Limited to M.S. in Oral Health Sciences degree students with graduate program approval.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in OHSC 9993.



**OHSC 9993. Master's Research Qualifying Examination. 1 Credit Hour.**

The Masters project must be formally accepted by the student's advisory committee prior to commencing the project. A comprehensive proposal will be reviewed by the student's mentor and advisors, and will be presented in a qualifying exam presentation to demonstrate appropriate understanding of the project. This proposal contains an introduction, theories, hypotheses, scholarly literature review, research methods, proposed alternatives and any other issues relevant to the project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Dentistry, Kornberg School.

**Course Attributes:** DI

**Repeatability:** This course may be repeated for additional credit.

**OHSC 9996. Master's Thesis in Oral Health Sciences. 1 Credit Hour.**

Limited to, and required of, M.S. in Oral Health Sciences degree students with graduate program approval.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in OHSC 9993 and 4 credits in OHSC 9991.

## Orthopedic Surgery (ORTS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**ORTS M152. Intro Orthopaedic Surg. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**ORTS M261. Introduction to Sports Medicine. 0 Credit Hours.**

The sports medicine elective will give the student an overview of the epidemiology, anatomy, pathophysiology, treatment and management of common sports related injuries. Additionally, this course will include Emergency Medicine based resuscitation lectures and active learning sessions. Students will have the opportunity to learn intubation skills, splinting and fracture reduction, Ultrasound, wrapping/taping of injuries, applying cervical spine precautions, and much more. This course is designed for first and second year medical students with an interest in the care of injured athletes. There are several pathways into Sports Medicine and this course will focus on the knowledge and skills that are learned in emergency medicine and utilized in sports medicine.

**Repeatability:** This course may be repeated for additional credit.

**ORTS M296. Orthopaedics Summer Research Elective. 0 Credit Hours.**

The purpose of this course is to fill a void in the current curriculum. It will provide the student the tools to perform a clinical research study or comprehensive literature review.

**Repeatability:** This course may be repeated for additional credit.

**ORTS M300. Orthopedic Surgery Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**ORTS M342. Principles of Orthopedic Surgery. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**ORTS M345. Career Exploration of Hand Surgery. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**ORTS M621. Global Orthopaedic Surgery. 0 Credit Hours.**

The global burden of orthopaedic surgery is continuing to grow, with the majority of the need in the developing world. As an institution that has a history of providing medical care to the poor, exposing students to training in a developing world location is an important aspect of their professional development. This elective will be a 4-week elective, with 2 weeks at Temple University Hospital and 2 weeks at an international site. The current site is Kijabe, Kenya. During the time overseas, the student will be able to participate in the care of patients, including taking a history, performing a physical exam, performing low risk procedures, suggesting diagnostic studies, interpreting studies and developing treatment plans. This will be under the close supervision of Temple LKSOM Orthopaedic Surgery faculty.

**Repeatability:** This course may be repeated for additional credit.

**ORTS M639. Sports Medicine. 0 Credit Hours.**

Students will gain experience in the field of sports medicine including exposure to the disciplines of primary care sports medicine, orthopedic sports medicine, sports physical therapy, and athletic training. There will be opportunity for participation in the treatment of sports injuries and illnesses in the following venues: Outpatient Sports Medicine Clinics with both Orthopedic Sports Medicine and Primary Care Sports Medicine Physicians; Outpatient Orthopedic Sports Medicine Surgical Procedures; Sports Physical Therapy Rehabilitation; Sports Medicine Didactic Sessions which include: Sports Medicine Journal Club, Orthopedic Grand Rounds, small group lectures given by Sports Medicine faculty; Independent review of the course materials which include: textbooks, articles, and web-based resources.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Medical, Fourth Year Medical.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Medicine.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**ORTS M640. Orthopedic Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**ORTS M645. Hand Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**ORTS M825. Orthopaedic Trauma - Sub-internship. 0 Credit Hours.**

The student will have the opportunity to function as an integral part of the Orthopaedic trauma team on a sub-internship level and will rotate with Drs. William De Long, Patrick Brogle, and Chinenye Nwachuku (fellowship-trained Orthopaedic trauma surgeons) at the Bethlehem hospital campus of St. Luke's University Hospital. The student will participate actively in the care of patients seen in the Operating Room, Emergency Room and Trauma Bay, and on the floors. He/she will gain exposure to the emergent care of patients, fracture reduction techniques, application of casts and splints, and participating in the daily work effort. The student will also be exposed to cold trauma such as nonunions, malunions, and osteomyelitis. The opportunity to get involved in Orthopaedic trauma research projects also exists. The student will take Trauma call with the Orthopaedic residents.

**Repeatability:** This course may not be repeated for additional credits.

## Otorhinology (OTOR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**OTOR M160. M1/M2 Otolaryngology (ENT) Clinical Elective. 0 Credit Hours.**

This course is designed to introduce students early in the pre-clinical years to otolaryngology-head and neck surgery (ENT) in the setting of the LKSOM mission of excellence in education, research and patient care. Students will expand their knowledge base through elective lectures and skills sessions. Group sessions to include case based learning and practical labs will solidify clinical and interpersonal skills. By interacting with the department chair and other motivated upperclassmen, residents, and faculty, students have the opportunity to model professional behavior and receive feedback regarding wellness and professional development. The ENT specialty is complex and closely linked with other departments and ancillary staff the elective also so serves as an ideal vehicle to teach systems-based practice and interprofessional collaboration.

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**OTOR M235. Pediatric Otolaryn. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**OTOR M331. Career Exploration of Otolaryngology/ENT. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**OTOR M629. General Practice Otolaryngology. 0 Credit Hours.**

General Practice Otolaryngology is a clinical elective course offered to fourth-year medical students. During their time on our service, students can expect to evaluate new patients in the office with General Otolaryngology practitioners. The emphasis will be on outpatient and office-based otolaryngology treatments and procedures. Occasionally, students will accompany patients they are following to OR. Additionally, students will present a critical review of a peer-reviewed publication and attend conferences and grand rounds. This course will be graded Honors, High Pass, Pass, Fail.

**Repeatability:** This course may not be repeated for additional credits.

**OTOR M630. Otolaryngology/ENT. 0 Credit Hours.**

**Course Attributes:** M2

**OTOR M730. Otolaryngology Preceptorship. 0 Credit Hours.**

This course was created in light of the COVID19 Pandemic to give 4th year medical students applying to Otolaryngology more exposure to the field and to strengthen their applications.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in OTOR M630.

**OTOR M830. Otolaryngology (ENT) Sub-I. 0 Credit Hours.**

Otolaryngology/ENT Sub-I satisfies the sub-I requirement for 4th year. Students will participate on the ENT service, in both the inpatient and outpatient setting. They will take on the role of an intern, including seeing consults, following patients, seeing patients in clinic and participating in OR cases. They will develop assessment and plans for the patients they are seeing.

**Repeatability:** This course may be repeated for additional credit.

## Pathology & Lab Medicine (PATH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PATH M195. Interp Clin Lab Tests. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M201. Hematopathology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M202. Endocrine Pathology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M203. Neuropathology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M204. Clinical Cytogenetics. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M205. Cytopathology. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M206. Liver & Kidney Pathology. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M207. Renal Path Elec. Micro. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M208. Oral Pathology. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M209. Gyn Pathology. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M211. Clin Micro/Imm/Vir. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M213. Blood Bank. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M215. Clinical Coagulation. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M219. Cardiac Pathology. 0 Credit Hours.**

Students will participate in the diagnosis of the preceptor's current cases, review material from the files of the department or preceptor, and discuss with the preceptor his/her clinical research. The goals are to (1) increase the student's knowledge in the area of expertise of the preceptor and (2) show the student how the practicing pathologist or laboratory scientist contributes to the evaluation of clinical problems.

**Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M221. Dermopathology. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M223. GI and Liver Pathology. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M225. Immunogen & Flow Cytom. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PATH M227. Lab Hem & Surg Pathology. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.

**PATH M228. Lung Pathology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M229. Surgical Pathology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M230. Soph. Elect in Path.. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M231. Interpr Clin Lab Tests. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M232. Head/Neck Pathology Preceptorship. 0 Credit Hours.**

This course targets MS1 and MS2 students who show an independent interest in head and neck pathology. Students will sit with a Head and Neck pathologist, reviewing concepts and cases from the arrival of the specimen in the gross room to sign out. Participation in weekly Head and Neck multidisciplinary conference is encouraged. The student is asked to participate in an independent head and neck pathology research project during the course of the preceptorship.

**Repeatability:** This course may be repeated for additional credit.

**PATH M233. Molecular Pathology and Immunogenetics Preceptorship. 0 Credit Hours.**

This course targets MS1 and MS2 students to facilitate early integration of basic science and clinical testing principles, by incorporating pathology competencies for medical education to promote life-long learning and understanding of medical practice. Students participate in case studies, transplant patient conferences and articles, learn HLA testing procedures, and Quality Management. The students also get an opportunity to see how transplant patients are evaluated for a lifesaving transplant. The students learn to use molecular techniques to interrogate disease processes. Using current or retrospective cases, the students learn the principles of a variety of assays used for oncology, genetics, and infectious diseases. They participate in clinical genomics data interpretation and learn emerging applications in the field of molecular pathology.

**Repeatability:** This course may be repeated for additional credit.

**PATH M234. Neoplastic and Non-neoplastic Pulmonary Pathology Preceptorship. 0 Credit Hours.**

This course targets MS1 and MS2 students to facilitate early integration of basic science principles and incorporates pathology competencies for medical education to promote life-long learning and understanding of the principles of medical practice. Students participate in the diagnosis of the preceptor's current cases, review material from the files of the department or preceptor, and discuss with the preceptor his/her clinical research. During this course, the students also get a first-hand opportunity to see real-time tissue specimens for both gross and histopathologic examination and follow the case till sign out with final results and the impact on management.

**Repeatability:** This course may be repeated for additional credit.

**PATH M235. Clinical Chemistry. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PATH M300. Pathology Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M358. Career Exploration of General Pathology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**PATH M361. Principles of Molecular Pathology. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M362. Principles of Renal Pathology. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M365. Principles of Cytopathology. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M366. Principles of Surgical Pathology. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M371. Principles of Transfusion Medicine. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M372. Principles of Histocompatibility. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M373. Principles of Hematopathology. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PATH M658. General Pathology. 0 Credit Hours.**

**Course Attributes:** M2

**PATH M660. Surgical Pathology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PATH M661. Molecular Pathology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PATH M662. Renal Pathology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PATH M665. Cytopathology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PATH M971. Transfusion Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PATH M972. Histocompatibility. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PATH M973. Hematopathology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

## **Pediatrics (PEDI)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PEDI M201. Introductory Elective. 0 Credit Hours.**

This generic first and second year Pediatric elective serves as an introduction to a special topic in the Department of Pediatrics. Topics vary from semester to semester and may include an extension of a content area already covered in the required curriculum, an introduction to a new topic or research issue, or exposure to a clinical discipline. First and second year electives are optional and do not impact graduation requirements. Electives are scheduled for seven two-hour sessions each, for a total of fourteen contact hours. Student interest and faculty availability determine topics offered each semester.

**PEDI M272. Ambulatory Pediatrics. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M273. Intro to Adolescent Med. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M274. Intro to Pediatrics. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M280. Neonatology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M300. Pediatric Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**PEDI M330. Pediatrics. 0 Credit Hours.**

**Course Attributes:** M7

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M418. Application of Data Science to Clinical Medicine and Medical Research. 0 Credit Hours.**

Data science, at the intersection of statistics and computer science, provides cutting edge tools for analyzing large data sets to provide predictive and causal models. These tools have been used extensively in the fields of econometrics and advertising (e.g. Google and Facebook); the application of data science to medicine is in its infancy, however, with the increasing availability of large clinical data sets, the opportunity to mine these sets for information has never been greater. While software engineers and applied mathematicians have the skills to use and develop these tools, they lack the content expertise needed to apply this knowledge to medicine. The purpose of this course is to provide medical students, graduate students, and medical researchers an opportunity to develop sufficient skills in modern data science to carryout research using large databases. It is assumed that the student has no training beyond introductory courses in statistics and/or epidemiology; no significant programming experience is required.

**Repeatability:** This course may be repeated for additional credit.

**PEDI M610. Pediatric Hematology/Oncology. 0 Credit Hours.**

Pediatric hematology and oncology -- common or interesting diseases. The following topics will be covered including detailed pathophysiology and available clinical and diagnostic studies. Recent advances in therapy and molecular diagnosis, as well as specialized studies will be discussed. The purpose of enrolling patients on therapeutic randomized protocols will be addressed - anemia, the most common referral to hematology Clinic - Bleeding diathesis focusing on Von Willerand Disease -- the most common coagulopathy. Acute leukemia -- the most common malignancy in children. Sickle Cell disease --as an example of hemolytic disorder. Neutropenia in childhood. Chronic Disease -- overall management strategies.

**Repeatability:** This course may be repeated for additional credit.

**PEDI M649. Pediatric Gastroenterology. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M670. Pediatric Emergency Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M671. General Pediatrics/Inpatient. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M672. General Pediatrics/Ambulatory. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M673. Pediatric Allergy. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M674. Pediatric Anesthesiology. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M675. Pediatric Cardiology. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M676. Pediatric Endocrine/Metabolism. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M677. Adolescent Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M678. Pediatric Subspecialties. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M679. Pediatric Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M681. Pediatric Immunology(HIV/AIDS). 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M682. Pediatric Infectious Diseases. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M683. Pediatric Rheumatology. 0 Credit Hours.**

**Course Attributes:** M2



**PEDI M685. Neonatal ICU (ICN) - Critical Care. 0 Credit Hours.**

The required critical care course will introduce students to the management of critically ill patients. Students are expected to follow their patients' progress and contribute to their care with supervision. Students will observe and assist as possible in procedures being performed in the ICU. Students will obtain exposure to assisted ventilation, palliative and end-of-life care.

**Course Attributes:** M2

**Pre-requisites:** Minimum grade of P in INTM M301, OBGY M320, PEDI M330, PSYM M340, SURG M350, NEUR M370, and FAMP M360.

**PEDI M686. Child Maltreat & Neglect. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M689. Pediatric Pulmonary. 0 Credit Hours.**

**Course Attributes:** M2

**PEDI M690. Pediatric Pulmonary ICU/PICU. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M691. Community Pediatric Health. 0 Credit Hours.**

The student will be exposed to outpatient pediatric patients in a private office setting. The student will learn about community resources and how physicians utilize these resources. In addition, experience will be gained in the management of both well and sick children who present to a pediatric practice. This rotation is primarily for the student who is interested in pursuing a residency in pediatrics. 2 weeks with a private practice in Coopersburg, PA; 2 weeks with a well established practice in Stroudsburg, PA. In addition, opportunities may be available for students to see families with the Visiting Nurse Association.

**Repeatability:** This course may be repeated for additional credit.

**PEDI M694. Ped Plastic & Recon Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M695. Pediatric Neurology. 0 Credit Hours.**

A 4-week clinical rotation at St. Christopher's Hospital for Children (Philadelphia, PA) providing the student with direct patient care experience and participation in didactic and discussion sessions related to the spectrum of neurological disorders in children and young adults.

**Course Attributes:** M2

**Repeatability:** This course may be repeated for additional credit.

**PEDI M697. Ped Orthopedic Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M698. Pediatrics. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PEDI M700. Outpatient Pediatric Sub-I. 0 Credit Hours.**

This course is an advanced pediatric outpatient experience. The student will work with the house staff in caring for outpatients and has responsibility for participating in the management of these patients.

**Repeatability:** This course may be repeated for additional credit.

**PEDI M860. Pediatrics Subinternship. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may be repeated for additional credit.

## Pharmaceutical Sciences (PS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **PS 5451. Statistical Quality Control. 3 Credit Hours.**

An introduction to statistical concepts, this course reviews control charts for variables, probability theory, control charts for attributes, and acceptance sampling systems. Class discussions include application to quality control of pharmaceutical manufacturing. Note: Not open to students who have taken the former PHARMACEUTICS 451.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **PS 5471. Biotechnology:Bioprocess Basic. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **PS 5477. Good Manufacturing Practices. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **PS 5478. High Purity Water System. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **PS 5492. Production of Sterile Products. 3 Credit Hours.**

This course reviews the theory and practice involved in the preparation of sterile, injectable products, covering formulation, manufacturing, facility requirements, validation and regulatory issues. Upon completion of the course, students will develop an understanding of the routes of administration of injectable drugs and the types of injections, current formulation methods, aseptic manufacturing processes, requirements for sterile manufacturing facilities, and validation, compliance and regulatory issues. Note: Not open to students who have taken the former PHARMACEUTICS 492. Also note that prior to fall 2016, the title of PS 5492 was "Production of Sterile Parenterals."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **PS 5493. Sterilization Processes. 3 Credit Hours.**

This course surveys sterilization processes used in the pharmaceutical, medical device, in-vitro diagnostic, and biotech industries. Current methods of sterilization are discussed, including thermal, gaseous, radiation, filtration, and aseptic processing. Students learn basic aspects of sterilization science as well as design, review, and audit sterilization validations and processes according to industry practices. Note: Not open to students who have taken the former PHARMACEUTICS 493.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **PS 5499. Pharmaceutical Drug Dosage Forms. 3 Credit Hours.**

Through an overview of drug dosage form design and manufacturing technology, principles of pharmaceutical processing and pharmaceutical dosage form design (including preformulation and biopharmaceutics) are discussed, including dosage forms such as tablets, capsules, modified dosage forms, semi-solid products, and transdermal delivery systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 5501. Development of Sterile Products. 3 Credit Hours.**

A study of the theory and practice in the development of parenteral products; dosage form design, formulation, solubility/physical pharmacy, excipients, assays, stability, physicochemical properties of biomolecules, delivery systems for controlled/sustained release and manufacturing methods. Note: Not open to students who have taken the former PHARMACEUTICS 501. Also note that prior to fall 2016, the title of PS 5501 was Development - Parenterals."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 5575. Regulatory Sciences. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8000. Topics in Pharmaceutical Sciences. 1 to 3 Credit Hour.**

Topics vary; specific topic(s) announced prior to the start of the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PS 8001. Principles of Drug Action/Pharmacokinetics. 3 Credit Hours.**

This course presents the fundamental principles of pharmacology, medicinal chemistry, and pharmacokinetics needed to understand their application in drug discovery and developmental processes. The material, presented in an integrated manner, includes the molecular mechanisms of drug action, structure-activity relationships, and the time-course of drug absorption and disposition.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8002. Pharmaceutical Analysis. 3 Credit Hours.**

Application of chemical analysis as it relates to pharmaceuticals and pharmaceutical manufacturing. Classical separation methods including GC, HPLC, and NMR as well as, hyphenated techniques (GC-MS & HPLC-MC) will be explored. The student will also be introduced to immunologic antibody based procedures and emerging technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8003. Pharmaceutical Manufacturing I: Preformulation/Formulation. 3 Credit Hours.**

Presents techniques relevant to all aspects of preformulation and formulation phases, as well as principles and mechanisms of incompatibility and stability testing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8004. Solid Dosage Forms - Small Molecules. 3 Credit Hours.**

This course focuses on the various solid dosage forms of pharmaceutical products, touching upon the various unit operations involved in their manufacture. Topics will include particle science and technology (mixing, powder flow) and dosage form design and manufacture. This course will provide one with a basic understanding of formulation development and unit operations. The focus will be on solid dosage forms, but semisolids and liquids (including suspensions and emulsions) will be covered as time allows.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8005. Pharmaceutical Biotechnology. 3 Credit Hours.**

This course will introduce students to pharmaceutical biotechnology, biophysical and chemical aspects of biotech products, and their pharmaceutical formulations and clinical applications. Amino acids, proteins, peptides, and nucleotides are of particular interest. The principles of pharmaceutical formulations and physicochemical evaluation of formulations will be discussed. Pharmacokinetics of biologics and current analytical methods used in pharmaceutical biotechnology are included. In addition, the course provides an introduction to biopharmaceuticals that encompass a variety of technologies ranging from products derived from natural sources, peptides, therapeutic proteins/monoclonal antibodies, oligonucleotide therapeutics (e.g. antisense, ribozymes, aptamers, siRNA), gene therapy and special issues in drug delivery. The course will begin with a review of the molecular, biochemical, pharmaceutical underpinnings that support each of the technologies and will move into a more detailed discussion of each therapeutic technology. Preclinical and clinical development, safety, efficacy and manufacturing issues will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8006. Physical Pharmacy I. 3 Credit Hours.**

The emphasis of this course is to form bridge between the concepts of physical pharmacy and the application of pharmaceutical sciences. Students will understand basic aspects of intermolecular forces, physical properties of solutions, ionic equilibria, buffers and isotonic solutions, solubility and partition phenomena, complexation and protein binding, reaction kinetics, mass transport, dissolution phenomena, interfacial phenomena, and rheology. Pharmaceutical applications based on the basic principles will be discussed as well. Students will be expected to be able to apply the basic concepts from this course to typical formulation and stability issues of pharmaceutical dosage forms. A previous course is physical chemistry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8007. Applied Biopharmaceutics. 3 Credit Hours.**

Presents the interrelationships of the physicochemical properties of the drug and the dosage form, to the route of administration and to the rate and extent of systemic absorption. Drug absorption mechanisms, physiological and GIT constraints on dosage form transit and bioavailability, effect of formulation parameters, dissolution methodologies, in-vitro/in-vivo correlation of drug product performance as well as SUPAC, ICH and FDA guidelines on development and approval process will be covered. Formulation strategies for optimum therapeutic outcome via application of pharmaceutical sciences to the design of drug delivery systems is provided.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8008. Advanced Principles of Pharmacokinetics. 3 Credit Hours.**

An advanced course in the theory and application of pharmacokinetics and pharmacodynamics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8009. Advanced Medicinal Chemistry I. 3 Credit Hours.**

Discussions of the organic chemistry of drug action and drug design. Current topics in the field are discussed using examples from the recent literature. The design, synthesis and structure activity relationships for major therapeutic drug classes are discussed in detail.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8011. Advanced Medicinal Chemistry II. 3 Credit Hours.**

Continued discussions of the organic chemistry of drug action and drug design with current topics discussed using examples from the recent literature. Students review the current literature, give presentations and write research proposals based on their readings and class materials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8012. Radioisotope Methodology. 3 Credit Hours.**

Introductory discussion of the characteristics and properties of ionizing radiation, methods of detection (gas ionization, scintillation, both liquid and solid spectroscopy), radiation standards for safety and protection, and basic evaluation of biological hazards and effects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8051. Seminar in Pharm Science. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PS 8111. Introduction to Toxicology. 3 Credit Hours.**

Toxicology is a multi-disciplinary science focused on the adverse effects of chemicals, drugs and environmental agents. In the first part of this course the basic principles of toxicology will be covered, including dose response relationships, mechanisms of toxicity and exposure. In the second part, target organs of toxicity will be presented with an overview of anatomy and physiology of different target organs (e.g. liver, kidney), as well as organ-specific response to toxic insult. In the final segment of the course, students will be exposed to a variety of areas of applied toxicology, including risk assessment, clinical & forensic toxicology, chemical carcinogenesis, reproductive toxicology and the role of toxicology in drug development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**PS 8121. Department of Pharmaceutical Sciences Seminar Series. 1 Credit Hour.**

The goal of the course is to expose graduate students in the Department of Pharmaceutical Sciences to the faculty research in our department. Students will be presented with a number of research topics, including pharmaceuticals, pharmacokinetics, medicinal chemistry, biotransformation, pharmacology, and physiology. In addition to the presentations by faculty members, several guest speakers will present their research topics and discuss their opinions on science careers outside of academia (i.e., industry, medical writing, medical science liaison, etc.). Through exposure to these diverse research topics, students will become more well-rounded scientists and become more aware of career opportunities that are available to them.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8122. Writing and Publishing a Review Article. 1 Credit Hour.**

The purpose of this course is to research, write and submit a manuscript (review article) in English for publication in a refereed scientific journal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8123. Bioinformatic Genes Drug. 1 Credit Hour.**

The course is a one semester Research project focused on inherited factors that modulate drug response. The use of Web-based computer software for data mining, genetic variability in humans, detection and prediction of pharmacologically relevant genetic polymorphisms will be presented. The course is an introductory level course for students involved in research on Pharmacogenomics and Pharmacogenetics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8125. Journ Club/Pharmacodynam. 1 Credit Hour.**

Course aims to keep participants up-to-date on current literature in the field. Participants will present the background, content, and implications of a paper of their choosing to the class. In addition, Temple researchers may present their ongoing research and/or review the current literature in the field. The goals of the course are to: 1) facilitate the sharing of knowledge and discussion of current information and 2) to aid students in the critical interpretation of the literature, and the presentation of the results to their colleagues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8126. Laboratory Experience in Pharmaceutical Sciences. 1 Credit Hour.**

Students enrolled in this course will be mentored by a member of the graduate faculty in the department in order to become familiar with the research area of the instructor and the everyday workings of the laboratory. The techniques, instrumentation, and procedures covered during the semester will vary depending on the concentration of interest and may include medicinal chemistry/drug discovery, pharmaceuticals/pharmacokinetics or pharmacodynamics/pharmacogenomics. Students will be exposed to a wide variety of experimental techniques and analytical instrumentation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PS 8127. Pharmacokinetics. 3 Credit Hours.**

The objective of this course is to present the fundamental principles of pharmacokinetics (PK). The topics will include PK data analysis, dosage regimen design, and the determinants of drug absorption, distribution, metabolism, and excretion. Pharmacodynamics, the study of drug concentration - response relationships, will also be presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8128. Principles in Drug Discovery. 3 Credit Hours.**

In this course, students will receive an introduction to the fundamental principles of drug discovery and development, beginning with an historical overview of drug discovery.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8129. Bioethics in Research. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8131. Principles of Biochemistry. 4 Credit Hours.**

The course provides students with information regarding the chemical and physical properties of biomolecules. Moreover, the interrelated roles of these molecules in a functioning biological system are emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8132. Topics in Pharmaceutical Biotechnology. 2 Credit Hours.**

This is a seminar course in which students will research and give oral presentations on topics of their choice within the broad subject of pharmaceutical biotechnology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8133. Introduction to Translational Molecular Technology. 2 Credit Hours.**

This is a survey course that will introduce graduate students to important topics in the area of translational research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8134. Neuroscience of Pain. 2 Credit Hours.**

This is a neuroscience course that covers the anatomical and physiologic basis for different forms of pain.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8402. Pharmacodynamics. 3 Credit Hours.**

This course covers the theoretical underpinnings and practical aspects of quantitative pharmacology. A key feature of the course is its concentration on the integrated study of a drug's pharmacokinetics (transport to its site of action: including absorption, distribution, biotransformation, and excretion) and its mechanism of action at the site of action. Emphasis is placed on the mathematical foundations of such topics as drug-receptor theory, Schild analysis, Furchgott's method, radioligand binding studies, PK/PD modeling, and isobolographic analysis of drug combinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8403. Advanced Pharmacogenomics. 2 Credit Hours.**

The course is a one semester course focused on inherited factors that modulate drug response. Special problems of genetic variability in humans, detection and prediction of pharmacologically relevant genetic polymorphisms will be discussed. The course will integrate current mechanistic knowledge of drugs, human genetics, data mining, and analytical tools to tailor drug administration for a specific genetic background.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in PS 8131.

**PS 8404. Pharmaceutical Sciences Literature Review. 2 Credit Hours.**

This course is to expose graduate students to the current literature in Pharmaceutics, Pharmacodynamics and Drug Delivery. The goal of the course is to expose the student to a variety of literature articles pertaining to the physical, biologic, and formulation of pharmaceutical dosage forms. At the end of the course the student should be able to compare and critique articles from several journals common to the area of pharmaceutics, analyze literature articles as to the relevancy the results to the discussion, propose new research based on the current literature article, and be able to write an abstract for a review article based on several publications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8464. Abuses of Drugs and Chemicals. 3 Credit Hours.**

Pharmacology of drugs of abuse and related chemicals, the extent of drug abuse, factors fostering drug abuse, and treatment methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8478. Modified Release Dosage Forms. 3 Credit Hours.**

The fundamentals involved in various extended release dosage forms and their modification for use in particular dosage formulations. Biopharmaceutical and pharmacokinetic aspects of extended-release dosage forms are discussed as well. Overview of polymeric excipients used in the formulation of extended-release dosage forms. Current commercial products under development will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8502. Advanced Pharmacokinetic Modeling I. 2 Credit Hours.**

This course will cover drug transport in biological systems and advanced topics in pharmacokinetics and pharmacodynamics. Course will also involve computer methods to derive models and discussion of current literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8582. Physical Pharmacy II. 3 Credit Hours.**

The rheological behavior of polymer systems will be discussed. The physical chemical properties of proteins and peptides will be presented with formulation applications. This is an advanced course. Physical Pharmacy I is a prerequisite.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8583. Chemical Surfaces & Interfaces. 3 Credit Hours.**

Topics: types and structure of surfactant molecules; properties of aqueous and non-aqueous surfactant solutions; foaming; micelle formation and solubilization. Binary systems; ternary systems; surfactant-water-amphiphile. Stabilization of emulsions and of solid/liquid dispersions. Biological applications.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8584. Advanced Drug and Gene Delivery Systems. 3 Credit Hours.**

The application of nanometer to micrometer delivery systems for disease management has made tremendous advances in recent years. Products of nanotechnology are expected to revolutionize modern medicine due to their versatility in targeting tissues and controlling the release of drugs. Global initiatives are in place to support nanotechnology and nanomedicine. In this interactive course, students will learn the basic principles of advanced drug and gene delivery and its major biomedical applications. The methods or strategies of preparation and evaluation of the commonly used drug and gene delivery systems will be discussed. In addition, students will present selected focused topics on the novel drug and gene delivery systems under the instructors' guidance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8592. Food and Drug Law. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8603. Dermatopharmaceutics. 3 Credit Hours.**

Study of the physiology, biochemistry, immunology, skin permeability, and penetration enhancers as well as role of growth factors in healing after injuries. Semi-solid products, influence of formulation variables and their overall drug release capacities in-vitro and in-vivo will be evaluated. Transdermal, iontophoresis, sonophoresis topics, and bioequivalence/bioavailability of topical preparation will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 8985. Teaching in Higher Educ. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PS 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course fulfills the continuous enrollment requirement after coursework completion while preparing for the Preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PS 9996. Master's Research. 1 to 6 Credit Hour.**

Master's Research course appropriate for students finished with coursework and working with a faculty member on the thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PS 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

This course is appropriate for students finished with coursework and working on their dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PS 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is limited to, and required of, students who have achieved candidacy and are now doing dissertation research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.



**PS P151. Medicinal Chemistry I. 4 Credit Hours.**

The course provides students with information regarding the chemical and physical properties of biomolecules. Moreover, the interrelated roles of these molecules in a functioning biological system are emphasized. As we progress through the course, study with the following goals in mind: Learn to speak the language of medicinal chemistry and comprehend the meaning, significance, and origin of terms; Understand the physical, chemical and biological context in which each biomolecule, reaction, or pathway operates; Focus on major themes, especially those relating to regulation, thermodynamics, and the relationship between structure and function; Know the most important techniques that have brought us to our current understanding of biochemistry/medicinal chemistry; Make connections between pathways and identify gaps in our knowledge that promise to challenge future generations of scientists. Upon course completion you should be able to: Understand the fundamental relationships between biochemistry, medicinal chemistry and pharmacology; Describe the metabolic pathways responsible for normal and abnormal human physiology; Identify the biochemical impact of diseases and some of the drugs used to treat these conditions.

**Repeatability:** This course may not be repeated for additional credits.

**PS P152. Medicinal Chemistry II. 4 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P155. Principles of Infectious Diseases. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P157. Anatomy/Physiology. 5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P158. Ant. Infective Agents. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P161. Pharmaceutics I. 3 Credit Hours.**

Upon the conclusion of this course students will have been introduced to biopharmaceutical aspects of a variety of dosage forms. They will become familiar with the format of prescriptions and the organization and contents of monographs and their appendices. The application of mathematics to the preparation of prescriptions and drug products will be introduced. The design, preparation, properties, and evaluation of solution dosage forms including incompatibilities will be introduced. Pertinent physical and chemical principles involving solubility, pH effects, selection of excipients (e.g., color, flavor, buffers, preservatives) and their effect on the performance and quality of these dosage forms will be examined. Students will become familiar with Oral solutions, ophthalmic solutions and colligative properties. Pharmaceutical Calculations will be emphasized during this course. Students must show mastery of pharmaceutical calculations at the completion of this course.

**Repeatability:** This course may not be repeated for additional credits.

**PS P162. Pharmaceutics II. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P164. Pharmacology. 4 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P171. Pharmacy Lab I. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P172. Pharmacy Lab II. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P251. Medicinal Chemistry III and Natural Products. 4 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P261. Concepts in Pharmacogenomics. 3 Credit Hours.**

The goal of this course is to present the contemporary pharmacogenetic principles applied to the latest innovations in medication therapy. In accordance with this goal, the course overviews genetic factors contributing to drug metabolism and drug response. Here, the emphasis is made on how the genetic makeup of individuals defines the reaction of a human body to drug therapy, with the accent on the relationship between genetic variability and adverse effects of drug therapy. Topics in the course provide a good background to bring together the disciplines of drug metabolism, pharmacogenomics, and clinical pharmacy practice. Basic procedures in pharmacogenetic evaluation of patients will be addressed during the lab exercise. As future pharmacists, it is your primary responsibility to provide pharmaceutical care and have knowledge of therapeutic effects as well as side effects of drugs. You are expected to understand and be able to disseminate/communicate new knowledge about human genome and genetic variability to patients, health professionals, and public health. We hope that students will appreciate the importance of genetic considerations in drug therapy for their future profession.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PS P262. Pharmacokinetics. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P265. Pharmacology II. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P271. Pharmacy Lab III. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P272. Pharmacy Lab IV. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P310. Psych/Clin Sub Abuse. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P381. Emerging Therapeutic Iss. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P382. Practical Chromatography. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P383. Natural Product Analysis. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P384. Writing/Pub Review Artic. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P386. Adv. Clinical Toxicology. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P387. Veterinary Pharmacy. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PS P389. Research. 1 to 3 Credit Hour.**

**Repeatability:** This course may be repeated for additional credit.

## Pharmacy Practice (PP)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PP P012. Eff Comm/Pharmacist I. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P013. Eff Comm/Pharmacist II. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P136. IPPE 1. 1 to 3 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P140. Professional Practice. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P142. Soc & Econ Aspcts/Hlthcare. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P145. Immunology/Biotechnology. 3 Credit Hours.**

This course provides foundational knowledge of the functions of the immune system at the molecular, cellular, and anatomical levels. The first part of the course describes the innate and adaptive immune systems, their cells and anatomical structures, their intricate methods of cell-cell communication, and how immune responses can be mounted against a virtually unlimited array of pathogens while minimizing collateral damage to the host. Next, we will consider natural immunity and vaccination against specific pathogens, immune responses in cancer and transplantation, and the unwanted consequences of immune responses in inflammation, hypersensitivity, and autoimmune diseases, and the drugs and vaccines to treat those conditions. The last part of the course will introduce the biotechnologies that are fueling the rapid discovery and development of vaccines and immunotherapeutic agents for a wide variety of diseases.

**Repeatability:** This course may not be repeated for additional credits.

**PP P146. Drug Information. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P148. Introduction to Pharmacy Care. 2 Credit Hours.**

This course is designed to provide a bridge between the pharmaceutical science courses and the clinical courses in the curriculum. During the first part of this course, students will learn how to select relevant data to assess in order to determine if a drug related problem (DLP) exists or could potentially occur. You will learn how to assess the history, physical exam findings and clinical laboratory tests to monitor the efficacy and safety of the patient's drug regimen. Students will also learn how to calculate the patient's creatinine clearance in order to accurately dose medications excreted by the kidney. The second part of the course has been designed to provide students with information and practice identifying and managing adverse drug reactions; and common problems that you will see in your IPPEs including pain management, anemia immunization schedules and selected OTC topics.

**Repeatability:** This course may not be repeated for additional credits.

**PP P231. Intr/Pharmaceutical Care. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P233. Path/Ther Cardiopulm I. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P234. Path/Ther Cardiopulm II. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P235. Pathophysiology/Therapeutics: Pediatrics. 1 Credit Hour.**

This course is designed to help students develop an understanding of the appropriate therapeutic management of common pediatric disease states.

**Repeatability:** This course may not be repeated for additional credits.

**PP P236. IPPE 2. 1 to 3 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P237. Path/Ther Endocr/Meta Di. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P239. Pharm Care Rec I. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P246. Pharm Care Rec II. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P248. Communication Skills. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P250. Economics of Pharm Pract. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P254. Bio Stat/Med Lit Eval. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P260. Contemporary Pharmacy. 2 Credit Hours.**

**Course Attributes:** WI

**Repeatability:** This course may not be repeated for additional credits.

**PP P270. Path/Ther Gastro-Nutri. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P280. Pharmacist Directed Care. 3 Credit Hours.**

This course will introduce students to concepts used in assisting people who seek advice about self-care for health maintenance or common health related problems in ambulatory pharmacy settings. Identifying conditions amenable for self-care and providing individuals with a pharmaceutical care plan containing recommendations for various OTC products, homeopathic remedies, and dietary supplements will be emphasized.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P310. Managed Care. 2 Credit Hours.**

The information presented in the course deals with the predominant method of health insurance for the residents of the United States in the early 21st century. The course builds on and adds to the curricular material provided in two Temple University courses: "Social and Economic Aspects of Health Care" and "Economics of Pharmacy Practice." This elective course will incorporate new educational material in various aspects of managed care including, but not limited to: principles of insurance design, history and development of managed care, financial aspects, modeling and projections in disease prevalence and incidence, the marketplace and competition, negotiations with providers and the concepts of gatekeepers in primary care, reinsurance and practitioner "report cards." Pertinent current events issues will be briefly discussed as appropriate and as time permits. There will be two written assignments in the form of case studies to be solved during the semester.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P312. ADRS Organ Systems Appr. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P313. Clin Pharmacokinetics. 1 to 3 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P314. Practical Public Health for Pharmacists. 3 Credit Hours.**

There is a growing need for pharmacists to be trained in public health. This course will focus on the practical aspects of the 5 public health foundation disciplines: health services, epidemiology, biostatistics, social/behavior health, and environmental health. Although the public health role of the pharmacists has yet to be clearly defined, the pharmacist provides a wealth of health information as well as services and activities that are often public health related. The Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree across the United States stated that graduates should be competent to "promote the availability of effective health and disease prevention services and health policy through the ability to apply population-specific data, quality improvement strategies, informatics, and research processes to identify and solve public health problems and to help develop health policy." Furthermore, the American Association of Colleges of Pharmacy (AACP) in 2004 emphasized the importance of public health in the role of pharmacists in its Center for Excellence in Pharmacy Education (CAPE) Educational Outcomes. Included in these outcomes is the "promotion of health improvement, wellness, and disease prevention in cooperation with patients, communities, and at-risk populations" through the availability of "effective, quality health and disease prevention services" and advancement of public health policy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P315. Adv Clinical Practice I. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P316. Adv Clinical Practice II. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P317. The Pharmacists in Transitional Care. 2 Credit Hours.**

This course is designed to give students an opportunity to examine the role of the pharmacist in patient care during times of transition in the healthcare system. The student will become aware of the challenges and disparities that may present at key points in the transition of care and learn optimal ways to improve the care process.

**Repeatability:** This course may not be repeated for additional credits.

**PP P318. Palliative Care. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P319. Independent Community Pharmacy Ownership. 2 Credit Hours.**

Provide current and up-to-date information on how to establish, operate and manage an independent community retail pharmacy that includes the application process with the city, state and the DEA and how to produce a comprehensive business and financial plan. Provide the study of different locations and their demographics. Discuss how to manage the construction phase and the development of a Pharmacy retail store. Discuss how to negotiate contracts with PBMs and drug suppliers. Discuss how to hire new employees and how to manage the Pharmacy business operation and workflow. Discuss customer service best practices. Discuss how to manage dispensing system, cash flow, accounting, advertising and public relations. Discuss daily legal matters, rules, regulations and inspections. Understand and manage Profit and Loss statements.

**Repeatability:** This course may not be repeated for additional credits.

**PP P321. Pathophysiology/Therapeutics Neurology/Psychiatry. 3 Credit Hours.**

This course will assist students in applying the pathophysiologic and therapeutic principles of selected neuropsychiatric conditions. Cases will be discussed to provide students with the opportunity to identify key subjective/objective information and to develop appropriate, evidence-based, drug related assessments and care plans. Emphasis will be placed on the students' ability to interpret pertinent data, to identify drug related problems, and to develop therapeutic plans with goals, monitoring parameters and counseling points.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P323. Pathophysiology/Therapeutics of Oncology and Immunology. 3 Credit Hours.**

The pathophysiology and clinical manifestations of selected immunologic and oncologic disorders will be presented as a basis for the discussion of evidence-based drug therapy for these diseases. The rational use of supportive therapy in the management of patients receiving chemotherapy will be covered. Monitoring therapeutic outcomes will be emphasized.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P325. Pathophysiology/Therapeutics - Infectious Diseases. 3 Credit Hours.**

This course is designed to increase the students understanding of the pathophysiology and appropriate therapy of common infectious diseases. The students will be expected to use pathophysiologic information and drug therapy characteristics to develop and support a pharmacotherapeutic plan to treat each disease state. Emphasis will be placed on a systematic approach that can be applied to the treatment of most infectious diseases.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P330. Path/Ther Gastro-Nutritn. 1 or 2 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P332. Path/Ther Imm/Derm/Ophth. 1 to 3 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P334. Path/Ther cardiopulm III. 1 to 3 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P336. IPPE 3. 1 to 3 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P338. Pathophysiology/Therapeutics - Gastroenterology/Nutrition and Renal Disorders. 3 Credit Hours.**

The pathophysiology and clinical manifestations of selected gastrointestinal; hepatic; and acute and chronic renal disorders will be presented as a basis for the discussion of evidence-based drug therapy for diseases affecting these organ systems. The effect of liver and renal disease on drug disposition and elimination will be emphasized. Principles of fluid and electrolyte therapy; enteral and parenteral nutrition will be covered. Monitoring therapeutic outcomes is also emphasized.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P340. Case Stud/Infectious Dis. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P341. Pharmacy Law. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P342. Prin & Prac Evid Based Med. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P344. Advanced Diabetes Management. 2 Credit Hours.**

The purpose of this course is for students to further advance their comprehensive knowledge of the pharmaceutical care of patients with diabetes mellitus. Students will participate in lectures and investigative assignments to fully understand the complexity of diabetes care. These advanced topics and assignments will expose students to experiences in which they will gain an appreciation for the intricacies involved with diabetes management, develop empathy for patients with diabetes, construct evidence-based treatment plans, and enhance oral and written communication skills. This course will build on principles learned in their 2nd year and will serve as a platform for shaping future pharmacists to provide excellent care for patients with diabetes.

**Repeatability:** This course may not be repeated for additional credits.

**PP P346. Pract Politics & Pharm. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P347. Pharm Care Rec III. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P348. Pharm Care Rec IV. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P350. Adv Radiopharmaceuticals. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P352. Economics of Pharm Pract. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P353. Pharmacoeconomics. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P354. Pharm Care/Ambulatory Pr. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P355. Drug Interactions: Mechanisms, Analysis, Clinical Applications. 2 Credit Hours.**

This course is designed to review the detailed mechanisms of drug interactions focusing on analysis of the clinical significance of each interaction. Students will learn how to develop evidence-based, patient specific pharmacy care plans to manage drug interactions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Pharmacy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P356. Spec Topic in Oncology. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P357. Clinical Nutrition. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P358. Marketing Health Care Serv. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P359. Prin of Clin Immunology. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P360. App/Educational Methods. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P361. Phar Pract/Geriatric Pat. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P362. Selected Top:Inf Disease. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P363. Food & Drug Law. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P364. Food & Drug Law II. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P365. Outcomes, Diver Phar Prof. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P366. Seminar I. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P367. Seminar II. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P368. Intro to Nuclear Pharm. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P369. Managed Care Pharmacy. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P370. Sem/Pharmaceutical Ethic. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P371. Drugs, Devices & Consumers. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P372. Curr Issues Med Errors. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P373. Home Infusion Therapy. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P374. Pediatric Therapeutics. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P375. Sur/Radiopharmaceuticals. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P376. Women's Health Care. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P377. Curr Prob-Pharmacotherapy. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P378. Therap Issues Crit Care. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P379. Cont Cncpts/Parentarels. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P380. Case Studies ADRS. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P381. Clin Drug Development. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P382. Prin/Pract Clin Research. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P383. Good Clinical Practices. 3 Credit Hours.**

The focus of this course on current good clinical research practices for the development of eventual marketing to the health care community will be on quality and integrity in the conduct of a clinical trial through compliance with existing regulatory standards.

**Repeatability:** This course may not be repeated for additional credits.

**PP P384. Med Error Sar & Contrl Pln. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P385. Introduction to Medical Writing. 2 Credit Hours.**

In this course, students will be introduced to the field of medical writing. Students will learn and practice researching and writing different deliverables, including abstracts, manuscripts, slide decks, and posters. Students will have the opportunity to learn the essentials of AMA (American Medical Association) Style and to hone their writing skills by writing weekly reflections in addition to several assigned written projects and presentations.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Pharmacy.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P386. Pharmacoepidemiology. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P387. Veterinary Pharmacy. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P388. Clinical Trial Mgt. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P389. Research in Clin Pharm. 1 to 3 Credit Hour.**

**Repeatability:** This course may be repeated for additional credit.

**PP P390. Spec Problems/Clin Pharm. 1 to 3 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PP P391. Community Pharmacy Practice. 2 Credit Hours.**

This course will review common topics in community pharmacy that will enhance the students' skills and proficiency when working in community pharmacy. The course will focus on non-dispensing (enhanced patient care) services and it will prepare students with the skills to be able to develop and lead the implementation of enhanced patient care services in the community.

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Pharmacy.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Pharmacy.

**Repeatability:** This course may not be repeated for additional credits.

**PP P406. APPE-In-Patient. 5 to 6 Credit Hours.**

The Clinical Inpatient APPE is a 4th year rotation that exposes students to inpatient pharmacy practice. Students will work directly alongside faculty members in various inpatient clinical settings and will be involved in all aspects of patient care, including developing and implementing therapeutic plans, patient counseling, and education. Students will work collaboratively with other professions to optimize drug therapy, with an emphasis on acute disease management. Students will receive individualized coaching to improve their clinical skills. Students will also participate in topic discussions on relevant clinical issues and present an inservice and journal club.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Pharmacy.

**Repeatability:** This course may be repeated for additional credit.

**PP P407. APPE-Ambulatory. 5 to 6 Credit Hours.**

The Clinical Ambulatory Care APPE is a 4th year rotation that exposes students to ambulatory care pharmacy practice. Students will work directly alongside faculty members in various outpatient clinical settings and will be involved in all aspects of patient care, including developing and implementing therapeutic plans, patient counseling, and education. Students will work collaboratively with other professions to optimize drug therapy, with an emphasis on chronic disease management. Students will receive individualized coaching to improve their clinical skills. Students will also participate in topic discussions on relevant clinical issues and present an inservice and journal club.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Pharmacy.

**Repeatability:** This course may be repeated for additional credit.

**PP P408. APPE-Community. 5 to 6 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**PP P409. APPE-Institutional. 5 to 6 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**PP P410. APPE-Elective. 5 to 6 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.



**PP P411. APPE-Elective. 5 to 6 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**PP P412. APPE-Elective. 5 to 6 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## Pharmacy Quality Assurance (QARA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**QARA 5000. Special Topics in Regulatory Affairs and Quality Assurance. 1 to 4 Credit Hour.**

Topics vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**QARA 5401. Fundamentals of Pharmacology and Pharmacokinetics. 3 Credit Hours.**

This introductory course to general pharmacology includes discussions of the mechanisms of action of selected drug classes. It covers pharmacokinetics, including clearance, bioavailability, compartment models, extravascular dosing, nonlinear pharmacokinetics and pharmacodynamics as they apply to the drug development process. Note: Not open to students who have taken the former PHARMACEUTICS 400 or those in the Non-Thesis M.S. program who have taken PHARMACEUTICS 5401.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5408. Pharmacoeconomics. 3 Credit Hours.**

The economic methodologies used to evaluate the cost effectiveness of drug therapy are reviewed. Cost effectiveness is examined in terms of outcome assessment and quality of life measurements. The course explores the dynamic environment of health care and the process of drug product selection in managed care. Not open to students who completed QARA 0480.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5451. Statistical Quality Control. 3 Credit Hours.**

An introduction to statistical concepts, this course reviews control charts for variables, probability theory, control charts for attributes, and acceptance sampling systems. Class discussions include application to quality control of pharmaceutical manufacturing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5458. Global Biopharmaceutical Industry. 3 Credit Hours.**

What social and economic factors contributed to the development of innovator and generic pharmaceutical companies, and what are their current and future trends? This course introduces students to the basic structure of the pharmaceutical industry, examining the growth and relationships among various sectors, including the fully-integrated companies of big pharma, the generic and biotech industry, and specialty and service companies, such as CROs and CMOs. Social, political, demographic, economic, and technological influences will be examined not only in the US domestic market, but also across major world economies, including the differences between national health and single-payer systems. A segment of the course focuses on the impact of the Waxman-Hatch Act on drug price competition and patent term restoration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5459. Drug Development. 3 Credit Hours.**

This course studies the drug development process from discovery through FDA marketing approval. It reviews the process of development and the interrelationships linking the various disciplines, introducing students to regulations governing the process, including the interactions with FDA, ICH, and other regulatory agencies. Note: This course is required for the M.S. in RA and QA, the Drug Development Certificate, and the Certificate in Clinical Trial Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5468. Validation of Facilities, Utilities and Equipment (FUE). 3 Credit Hours.**

The production of FDA regulated products (pharmaceutical, medical device, food, etc.) is highly dependent on both the initial qualification of facilities, utilities, and equipment (FUE) along with the ongoing efforts to maintain the qualified/validated state meeting current user and regulatory needs. This course focuses on the key validation elements specific to qualifying and validating facilities, utilities, and equipment. In practice, validation of these items is also a prerequisite for other validation efforts including process, cleaning and test method. The class will examine the key concepts of FUE qualification/validation as well as the life-cycle through retirement of the FUE.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in QARA 5477.

**QARA 5469. Pharmaceutical Laboratory Quality Systems and Operations. 3 Credit Hours.**

The laboratory plays a key role in the manufacture and release of pharmaceuticals. An effective QC lab assures the integrity of the data generated to enable the release of raw materials, in-process, and finished products and also meets production schedules. In addition, production-related responsibilities must meet with compliance standards. This course covers these responsibilities in detail while providing insight on how to meet internal and regulatory requirements for lab operations. Why labs fail and what actions must be taken to prevent failure are covered in depth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5471. Biotechnology: Bioprocess Basics. 3 Credit Hours.**

This course emphasizes regulatory and control aspects of biologics manufacturing as well as Quality by Design principles. It provides students with a basic understanding of the major steps involved in the manufacture of biologics/biopharmaceuticals, including preparation of media, fermentation, harvesting/recovery, purification, and formulation. Included is a review of basic bioscience topics (e.g., microbiology, biochemistry, and molecular biology) with particular relevance to the study of bioprocessing techniques. Note: Not open to students who have taken the former PHARMACEUTICS 481 or those in the Non-Thesis M.S. program who have taken PHARMACEUTICS 475 or PHARMACEUTICS 5471.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5472. Pharmaceutical Marketing. 3 Credit Hours.**

This course describes the marketing dynamics of the healthcare industry and the ways in which pharmaceutical companies can better meet the changing needs of patients and managed care. Focusing on individual marketing techniques, it stresses the development of multidisciplinary marketing teams. The product attributes discussed in the selling process are efficacy, safety, cost effectiveness, compliance, and treatment outcomes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5473. Generic Drug Regulation (ANDAs). 3 Credit Hours.**

By examining specific case studies of Abbreviated New Drug Applications (ANDAs) which document the bioequivalence of generics to an original product, this course gives students an overview of regulatory requirements for generics, introducing problems unique to this segment of the industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5474. Process Validation. 3 Credit Hours.**

Since the concept of "validation" originally appeared in GMP regulations, it has extended to every step in product manufacturing from building the plant to the methods used for testing and releasing its products. The course exposes students to all aspects of validation. FDA Guides and Guidelines, as well as the current emphasis on validation concerns by FDA (as identified in 483 and Warning Letter observations), will be incorporated. Students develop acceptable validation protocols and learn what constitutes an acceptable validation report.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5476. Good Laboratory Practices. 3 Credit Hours.**

This course explores the regulatory and quality assurance issues pertinent to pre-clinical safety research. Research study design and processes will be analyzed by pharmacologic and toxicologic methods and for carcinogenicity and reproductive toxicology. Some time is devoted to mutagenicity and pharmacokinetics, discussed in the context of developing a safety profile and determining the potential risk to humans in subsequent clinical trials. Note: This course fulfills the GxP requirement for M.S. in RA and QA students and for the Drug Development Certificate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5477. Good Manufacturing Practices. 3 Credit Hours.**

This course provides an introduction to cGMP (current good manufacturing practices). Regulations for drugs under the Food, Drug and Cosmetic Act (21 CFR 210 and 211) and their implication for personnel, buildings, equipment, and records will be thoroughly reviewed and studied. It includes a study of pertinent legal decisions and regulatory actions based on non-compliance. Note: This course fulfills the GxP requirement for RA and QA MS students and for the Drug Development Certificate. Students with extensive manufacturing experience in GMPs may petition the School to allow them to replace the basic GMP class with Advanced GMPs. To do so, students must have at least five years of GMP experience and submit a resume to the RA and QA Office for final approval.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5478. High Purity Water Systems. 3 Credit Hours.**

This course examines high purity water systems from the Quality Function perspective, covering basic aspects of system design and operation. Special attention is paid to unit operations, sanitization procedures, and routine monitoring programs. Students learn to plan validations and establish routine monitoring programs to assess ongoing quality. Domestic (NFDWR/NSDWR) requirements and international standards and regulatory expectations are discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5479. Advanced Good Manufacturing Practices - Defining "c". 3 Credit Hours.**

This course brings students from the basic GMP concepts presented in QARA 5477 to a fuller understanding of the concepts of current good manufacturing practices. Discussions include how to evaluate FDA 483s and Warning Letters, the routine review of periodicals, including the Pink Sheet, Gold Sheet, and other GMP-oriented documents, and how to evaluate information provided by the FDA. Recalls are discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5491. Pre-Approval Inspections. 3 Credit Hours.**

This course provides a detailed overview of Pre-Approval Inspections and how to conduct audits of facilities based on the responsibilities delineated in a pending drug application, including NDAs, ANDAs and NADAs. Emphasis is placed on reviewing the Pre-approval audit process, Pre-Approval laboratory issues (including analytical and microbiological), technology transfer, case studies involving various dosage forms, and outsourcing issues. This course stresses key areas for Pre-Approval inspection audits. Case studies help prepare students for issues arising during a Pre-Approval inspection. The history and evolution of the Pre-Approval program are discussed. Note: Not open to students who have taken the former PHARMACEUTICS 490.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5492. Production of Sterile Parenterals. 3 Credit Hours.**

This course reviews the theory and practice involved in the preparation of sterile, injectable products, covering formulation, manufacturing, facility requirements, validation and regulatory issues. Upon completion of the course, students will develop an understanding of the routes of administration of injectable drugs and the types of injections, current formulation methods, aseptic manufacturing processes, requirements for sterile manufacturing facilities, and validation, compliance and regulatory issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5493. Sterilization Processes. 3 Credit Hours.**

A study of the theory and application of sterilization processes in the preparation of sterile pharmaceutical products. The course will cover basic principles and current sterilization technology. The course will focus on moist heat sterilization using autoclaves which is the predominant sterilization method employed in the production of pharmaceuticals. A case study will be used in the course demonstrating the specification, installation, qualification and regulatory approval of a new autoclave facility. An overview of gas and radiation sterilization will be provided. Specific pharmaceutical product examples using radiation and gas sterilization will be reviewed in detail. Not open to students who have completed QARA 0493.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5494. Quality Audit. 3 Credit Hours.**

This course covers topics in quality assurance principles, audit techniques, audit types, audit presentation and reports, auditing procedures for GMPs, GCPs, and GLPs. Note: This course is required for the MS in RA and QA; however, students interested in RA may substitute IND/NDA Submissions. Not open to students who have completed QARA 0494.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (QARA 5476, QARA 5477, QARA 5479, or QARA 5536)

**QARA 5495. Investigational New Drug/New Drug Application Submissions. 3 Credit Hours.**

This course covers the development of Investigational New Drug (IND) and New Drug Application (NDA) submissions for FDA review. The major emphasis is directed toward developing an understanding of the philosophies and requirements FDA imposes on data submitted to support INDs and NDAs. It covers the process of producing INDs and NDAs (managing the teams, producing the submission, using electronic media) and emphasizes how to work with FDA to gain approval of a submission. FDA meetings, advisory panel hearings, appeals, strategies for review and approval of NDAs, use of Orphan drug status, and the various avenues of expedited review are discussed. Note: This course is required for the MS in RA and QA; however, students interested in QA may substitute Quality Audit. Not open to students who have completed QARA 0495.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (QARA 5459 or QARA 5592)

**QARA 5496. Regulation of Medical Devices: Compliance. 3 Credit Hours.**

This course examines the broad scope of the medical device industry and its quality assurance practices, covering the preclinical, clinical, manufacturing, postmarket reporting, and device-tracking compliance regulations in the U.S. and other major world markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5497. Statistics for Clinical Trials. 3 Credit Hours.**

Assuming no previous courses in statistics, this introductory course reviews topics of interest in statistical evaluation of clinical trials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5498. Computerized System Validation. 3 Credit Hours.**

This course studies the regulatory history and background for computerized system validation (CSV). The current FDA and global CSV relevant regulations including the predicate rules will be discussed. The course will also address compliance with 21 CFR Part 11. The course will introduce students to software development methods and deliverables as they relate to CSV. A wide range of computerized systems typically employed in regulated environments will be examined and their unique challenges will be discussed. Students will have the opportunity for hands-on practice in the development of key validation deliverables and will complete an assigned project. Software development experience is not needed, but a better than average understanding of technology and the systems used in Life Sciences is expected. Not open to students who have taken QARA 0498.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5499. Drug Dosage Forms. 3 Credit Hours.**

Through an overview of drug dosage form design and manufacturing technology, principles of pharmaceutical processing and pharmaceutical dosage form design (including preformulation and biopharmaceutics) are discussed, including dosage forms such as tablets, capsules, modified dosage forms, semi-solid products, and transdermal delivery systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5502. Regulation of Medical Devices: Submissions. 3 Credit Hours.**

This course provides an overview of medical device submissions. The course begins with a review of laws specific to medical devices such as the requirement for pre-market submissions. Specific topics include device classification, investigational device exemption (IDE) applications, pre-market notification submissions [510(k)s], pre-market approval applications (PMAs), humanitarian device exemptions (HDEs), product development protocols (PDPs), STED and an overview of Global Harmonization Task Force recommendations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5503. Design Controls for Medical Devices and Combination Products. 3 Credit Hours.**

This course focuses on design control requirements and practices in the medical device and combination products industry. Class discussions will include design control requirements as they apply to medical devices and combination products. Current regulations and practices will be discussed and utilized to provide students with experience in executing design control activities for a range of products.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5505. Global Regulation of Medical Devices. 3 Credit Hours.**

This course provides an overview of international medical device regulations. Beginning with a discussion of the similarity of global requirements (including both voluntary and mandatory standards and directives and progressing to in-depth analyses of market specific requirements), the course provides students with resources to meet the regulatory requirements for the largest world markets. The Medical Device Directive, the In Vitro Diagnostic Directive and the Active Implantable Medical Device Directive will be discussed, as well as initiatives by the Global Harmonization Task Force related to the classification, development, and complaint handling for medical devices. As part of this course, the student will learn the quality system requirements of ISO13485, risk management according to ISO14971 and how to CE mark their product. Country-specific regulatory requirements for Canada, EU, Australia and Japan are included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5506. Environmental Law and Regulation (EPA). 3 Credit Hours.**

The mission of the Environmental Protection Agency (EPA) is to protect human health and the environment. This course will provide an understanding of basic environmental laws and regulations and EPA's enforcement activities. Students will learn how to find, analyze and apply the significant laws that EPA administers, such as: the Clean Water Act (CWA), the Clean Air Act (CAA), the Endangered Species Act (ESA), Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Occupational Safety and Health Act (OSHA), Toxic Substances Control Act (TSCA) and others, in addition to gaining a working familiarity with environmental regulations (40 CFR). Not open to students who have completed QARA 0510.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5507. Regulation of Non-Prescription Healthcare Products. 3 Credit Hours.**

This course examines non-prescription healthcare products in the U.S., including their legal status (both past and present). Starting with discussions of how non-prescription healthcare products are classified, the course will focus on the Food and Drug Administration's OTC Monograph system and the OTC Monograph User Fee (OMUFA). Students will learn how non-prescription labeling evolved (including discussions on Drug Facts Labeling) and examine cases where prescription products were switched to OTC, including the impact of FDA's NSURE Initiative, a draft guidance that will facilitate Rx-to-OTC switches. A brief overview of Non-Prescription classifications outside the U.S. will also be included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in QARA 5592.

**QARA 5508. Good Pharmacovigilance Operations. 3 Credit Hours.**

This course provides a solid foundation for understanding/managing the complexities of the lifecycle of an individual case safety report (ICSR). It reviews the process from receipt of the ICSR to reporting to regulatory authorities (both as an expedited ICSR and within a periodic safety update report). It compares US and EU regulations and ICH guidances in this area. It also covers the requirements for a validated safety database to process ICSR and Quality Systems in a Pv department. The course discusses the management of a Pv department and the business decisions required to manage the volume of cases received. Also discussed is the role of Pv agreements and preparation for a Pv inspection.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5509. Pediatric and Orphan Drug Regulations. 3 Credit Hours.**

This course introduces students to pediatric and orphan disease drug development, which includes defining these two populations, discussing where they overlap, and the historical and current challenges in developing therapeutic products for them. Biopharmaceutical medications and aspects of medical device development for these populations will also be included. Discussions focus on legislative changes and the importance of legislative advocacy during the past three decades for pediatric and orphan disease drug development, as well as incentives to make drug development in these areas profitable. While the primary focus of the course will be on the United States and the FDA, the course will include similar activities in the European Medicine Agency (EMA) and other relevant regulatory agencies around the world. Specific examples of successful pediatric and orphan drug development programs are included as well as guest lecturers presenting current issues and trends in these areas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5511. Advanced Audit Workshop of Quality Systems. 3 Credit Hours.**

This course, which is a continuation of Quality Audit, discusses the components of a quality system in greater depth and detail, including control systems, procedures, and documentation. Students design and audit a quality system; they also audit and critique quality systems presented by the faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5512. Microbiological Concepts in Pharmaceutical Manufacturing. 3 Credit Hours.**

This course addresses essential microbiology concepts and contamination control of manufacturing and quality control that form the basis of Good Manufacturing Practices (GMPs) for both sterile and non-sterile pharmaceuticals. Emphasis is placed on a review of the following from a microbiological perspective: basic microbiology and microbial awareness, cleanroom design and microbiology, cleaning and disinfection, aseptic techniques, microbial identification, objectionable microorganisms, environmental monitoring, importance of risk assessment, manufacturing technologies and techniques, building quality into processes and contamination control strategy, influence of raw material quality on finished product, microbial deviation investigations and key microbiological tests performed at in-process and finished product stages. The course stresses practical matters and includes case studies to prepare students for daily issues arising in industry. Not open to students who have taken QARA 0512.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5513. Active Pharmaceutical Ingredients (APIs). 3 Credit Hours.**

This course provides a working background on Active Pharmaceutical Ingredients (APIs) used in pharmaceutical dosage forms with focus on the development, manufacture and global regulations that impact successful marketing approval of products. The primary focus is on small molecule synthetic APIs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in QARA 5459.

**QARA 5514. Regulatory eSubmissions. 3 Credit Hours.**

This course will explore the evolution of global regulatory submissions from the original paper format to the current electronic common technical document (eCTD) and non-eCTD electronic submissions (NeeS). This course will primarily focus on current regulations, tools, and specifications associated with electronic submissions and electronic requirements of included documentation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in QARA 5459.

**QARA 5515. Biologics/Biosimilars: A Regulatory Overview. 3 Credit Hours.**

Since the first biopharmaceutical product approval in 1982 (recombinant human insulin), the biotechnology derived product market has been rapidly growing with introduction of a number of promising advances in medicine such as therapeutic monoclonal antibodies, cancer vaccines, cytokines, antisense technology, interference RNA, and growth factors. As with traditional drugs (small molecules), the regulatory framework for approval of a biotechnology derived product (biologics) is complicated. In addition, there has been much debate about the introduction of biosimilars using an abbreviated approval process. An overall biologics-based process map beginning with pre-clinical through the post-marketing stage will be discussed.

Topics such as therapeutic proteins/peptides, gene therapy, stem cells, vaccines, interference RNAs, PK-PD, world-wide regulatory filings, pre-clinical IND-enabling studies, BLA/CTD filing, biosimilars/follow-on-biologics, selected case studies, immunogenicity, comparability studies, manufacturing challenges, clinical trials, market exclusivity, and related regulatory guidelines will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5516. Cleaning Validation. 3 Credit Hours.**

This course will review the different aspects of a pharmaceutical cleaning validation program and the criteria for each. The course will go from protocol to final report with emphasis on the regulatory risks and consequences. FDA and other regulatory agency observations will be highlighted to reinforce class material.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5518. Regulatory Issues in Pharmacogenomics. 3 Credit Hours.**

Pharmacogenetics (PGt) is the study of genetic causes of variability in drug metabolism (pharmacokinetics) and responses to drugs, including adverse events (AEs) and desired pharmacological effects (pharmacodynamics). Variability can be attributed to variations in DNA, such as polymorphisms, or sequences that influence an enzyme or a receptor activity. Pharmacogenomics (PGx) is the science involving pharmacology and genomics which studies how genetic differences within a population affect body's response to a drug. After the completion of the Human Genome Project, PGx has become an attractive tool in the attempt to develop personalized medicine that can be adapted to each person's own genetic makeup and lead to a higher therapeutic efficacy. The FDA (and other regulatory agencies) is requesting that sponsors conducting such programs consider providing pharmacogenomic data to the Agency voluntarily, when such data are not otherwise required under the regulations. Such voluntary submissions would facilitate the drug approval process and help identify patients who need dose adjustments or are prone to certain toxic effects (reflected in the drug's label).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5532. Global Labeling Regulation: Principles and Practices. 3 Credit Hours.**

Provides a detailed analysis of corporate labeling practices in the U.S. and E.U., comparing and contrasting FDA, EU, and International Congress on Harmonization regulations. Special focus is devoted to new FDA guidelines and pharmacovigilance guidelines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5533. Requirements for Product Labeling and Advertising. 3 Credit Hours.**

This course examines strategies for creating drug labeling during new product development, for updating existing product labeling, and for creating "harmonized" core data sheets for products marketed globally. Students gain insight and awareness of current trends in advertising and promotional regulation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5534. Regulatory Aspects of Biomedical/Technical Communication. 3 Credit Hours.**

This course reviews regulatory requirements of biomedical/technical writing in the pharmaceutical industry. Students research, summarize, and organize typical scientific data. Issues of content (relevancy, accuracy, balance, and currency), organization, and style (e.g., American medical Association Manual of Style and current FDA and ICH guidelines) are addressed. Writing exercises include topics such as the Physician's Desk Reference, developing product label package inserts, and summarizing studies in pharmacokinetics, pharmacodynamics, efficacy and safety, product development, and stability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5535. Advanced Topics in Labeling Development. 3 Credit Hours.**

This course reviews the regulatory and legal fundamentals of labeling FDA-regulated products, specifically, prescription pharmaceuticals, emphasizing the direct application of the regulations to actual practice. It analyzes case studies and current practices, providing an overview of legal, regulatory, and marketing concepts affecting labeling. It discusses the application of current knowledge and explores new trends in the legal and regulatory framework surrounding the development and implementation of drug labeling. As a class project, students are assigned to drug development teams (Regulatory Affairs, Marketing and Clinical) and provided with the known data of their compounds. Teams determine what information is needed to complete the draft labeling for NDA submission, and develop a final label; they hold mock negotiations (internal and with the Agency) and propose changes to labeling in response to post-marketing surveillance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5536. Good Clinical Practices. 3 Credit Hours.**

This course examines the federal regulatory requirements and processes necessary to conduct valid drug trials on human volunteers. Emphasis is placed on managing the clinical drug study and auditing its processes and generated data. The course also addresses ethical issues and volunteer informed consent. Note: This course fulfills the GxP requirement for the M.S. in RA and QA students and for the Drug Development Certificate. It is required for the Certificate in Clinical Trial Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5537. Clinical Trial Management. 3 Credit Hours.**

This course is designed to help the clinical research department member and those familiar with the industry working in related fields become more effective members of the clinical research team, whether at a company or an investigator's office. This course covers the day-to-day operations of a clinical trial, from site and investigator selection through monitoring and data retrieval. It covers key topics such as budgeting, protocol preparation, site and investigator selection, monitoring, document and file creation and maintenance, and the participation of key members of the principal investigator's team. Note: This course is required for the Certificate in Clinical Trial Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5538. Clinical Drug Safety and Pharmacovigilance. 3 Credit Hours.**

This course provides students with an in-depth understanding of what pre-marketing Clinical Safety and Risk Management (CSRM) means in the context of both American (FDA) and international (ICH-E2C) regulatory requirements. Beginning with an historical overview of IND and international safety requirements, it examines the processes and systems in place to support compliance and the strategic documentation required for applications. It also looks at the role of risk management and epidemiological methods used to identify the signals used to quantify, assess, and communicate adverse drug reactions (ADR). Topics include clinical trial policy, the roles of the investigator, patient, and IRBs, privacy issues, informed consent, DSMB, and other related matters. Note: This course may be substituted in place of Clinical Data Management in the Certificate in Clinical Trial Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**QARA 5539. Global Clinical Drug Development. 3 Credit Hours.**

This course focuses on the specific regulatory requirements of clinical development in the European Union, Eastern Europe, Latin America, Canada, India, China and Japan. It will review the efforts of the International Conference on Harmonization (ICH) to unify Good Clinical Practices (GCPs) in these global areas, exploring the differences between cultures, races, and societies and the impact of socialized medicine. Upon successful completion of this course, students will: gain an overview of multinational clinical drug development; gain a basic understanding of cultural differences towards GCPs in various regions of the world; understand key regulatory bodies and concepts governing clinical development in various global markets; and become familiar with the ICH and its legal requirements for global clinical development. Note: This course may be substituted in place of Clinical Trial Management in the CTM certificate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5541. Pharmaceutical Packaging: Technology and Regulation. 3 Credit Hours.**

This course focuses on the complexities of packaging for the pharmaceutical industry, covering commonly used packaging systems (bottle/blister packaging for Oral solids) as well as niche applications (such as sterile/parenteral, inhalation, and nasal systems). In addition to the container/closure systems, some of the packaging processing methods will be covered. A review of the applicable regulatory environment and the submission requirements for drug products will be included. The submission needs will be covered, with a focus on the needs of the newly implemented Common Technical Document (CTD). A visit to a manufacturing facility of one of the industry's suppliers will be required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5542. Pharmacopoeia Compliance: Understanding the Global Impact on RAQA. 3 Credit Hours.**

Compliance with requirements published by pharmacopoeias around the world is a legal and regulatory requirement in those countries and regions in which the pharmacopoeia is applicable. This fundamental (and often misunderstood) principle is an important consideration throughout the drug product life cycle across the bio/pharmaceutical industry. This course provides an in-depth look at the interplay of pharmacopoeias, quality assurance, and regulatory affairs to assist companies in establishing effective processes, partnerships, and tools to maintain appropriate and timely compliance. Topics include why pharmacopoeia compliance is necessary and why it is difficult; a history of pharmacopoeias and harmonization efforts; the revision process for global and national pharmacopoeias and the associated surveillance process used by industry to identify pharmacopoeia changes; the process for monograph development including real-world case studies; and new topics that are on the horizon as the pharmacopoeias continue to evolve. Additionally, the course provides compendial touchpoints during each stage of product development and its importance to regulatory decision making throughout a development program and lifecycle management of a therapeutic product, including innovator, generic, virtual, OTC, and start-up companies who discover, develop, manufacture, and distribute small-molecule drug products, biotherapeutic products, and vaccines, as well as the drug substances and excipients used in these products. Class discussion and hands-on exercises will provide insights on the complexity encountered and possible solutions that companies face every day. The class will focus on small molecule drugs and biotherapeutics and will not include an in-depth overview of herbals or dietary supplements. Note: Science background required. Suggested prerequisites (but not required): Drug Development (5459), Good Manufacturing Practices (5477), and Generic Drug Regulation: ANDAs (5473).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5543. Good Distribution Practices. 3 Credit Hours.**

Students will study the organizational, managerial and technology issues related to the supply chain, logistics, and distribution functions of the pharmaceutical industry, particularly generic pharmaceuticals. They will be introduced to the tools and technologies that companies use to optimize their supply chain, logistics, and distribution functions, with specific emphasis on how generic companies configure and operate these aspects. Topics include: supply chain operations; integration with distributors, wholesalers, and other channels; WHO/FDA regulations and guidelines; supply chain security (counterfeiting, RFIDs, etc.); inventory considerations (management, turns, cost); demand and capacity planning; lean operations; postponement; supply constraints; and technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5544. Regulatory Intelligence. 3 Credit Hours.**

This course examines the fundamentals of Regulatory Intelligence, including what it is, how it is conducted, and how it is used to influence regulatory decision making throughout the development and lifecycle management of a therapeutic product. Students will learn to monitor the legislative and regulatory landscape by assessing accessible information data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (QARA 5459 and QARA 5592)

**QARA 5545. Post Approval Changes (PAC). 3 Credit Hours.**

This course reviews SUPAC guidelines developed by CDER to maintain product safety, efficacy, and quality while giving manufacturers substantial regulatory relief and flexibility. A basic review of formulation development of various dosage forms provides a complete understanding of the guidelines and of regulatory strategies for formulation development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5546. Global Pharmaceutical Excipient Regulation. 3 Credit Hours.**

An integral part of almost all pharmaceutical dosage forms, excipients play an important role in drug development. This course discusses the function of excipients, providing an in-depth examination of their unique yet globally diverse regulatory requirements in major world markets. Excipient selection, assessment, and supplier qualifications will be discussed, as well as Adverse Events (AEs) related to excipient quality. This course stresses how global pharmaceutical excipient regulation is critical in developing formulations that have the potential for international approvals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5547. Project Management for Clinical Trials. 3 Credit Hours.**

Creation of clinical development plans to better lead, manage and operate clinical trials. Combines basic project management methodology and drug development best practices needed for leading and managing a clinical trial time.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (QARA 5459 or QARA 5536)

**QARA 5548. Risk Management of Pharmaceutical and Medical Devices. 3 Credit Hours.**

This course focuses on risk management requirements and practices in the pharmaceutical, medical device, and biotech industries. Current regulations and risk management tools will be discussed and utilized to provide students with experience in executing risk assessments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5571. Post-Marketing Safety Surveillance. 3 Credit Hours.**

This course provides an in-depth understanding of post-marketing safety surveillance (PMSS) in the context of both American (FDA) and international (ICH-E2C) regulatory requirements. It begins with a historical overview of PMSS and then reviews the role of epidemiological methods in identifying signals and quantifying, assessing, and preventing adverse drug reactions (ADR). Medical/legal issues, benefits and limitations of safety surveillance systems, labeling changes, the ability to refute false signals, and social and ethical obligations inherent in the conduct of PMSS are discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5572. Vaccines: Regulatory Affairs and Quality Assurance Issues. 3 Credit Hours.**

This course addresses the history, research and development, manufacture, marketing, and medical impact of vaccines. Various public policy, regulatory, ethical, and legal issues in this area are discussed as they pertain to the U.S. and, to some extent, international markets. Beginning with the eradication of smallpox, this course covers the development of widely used vaccines against once common diseases (e.g., polio, mumps, varicella, etc.), to the development of vaccines against HIV, anthrax, and certain types of cancer.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5573. Pharmacoepidemiology. 3 Credit Hours.**

This course introduces students to principles of study design, concepts of causal inference, and major types of epidemiological studies. These principles are applied to the distribution and determination of the effects (expected and unintended, beneficial and adverse) of pharmaceuticals on human populations. Risk-benefit analyses, cost-benefit assessments, regulatory issues, and legal and public health concerns are discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5574. Pharmaceutical Quality Management Systems. 3 Credit Hours.**

This course presents a comprehensive Quality Management Systems approach to the pharmaceutical industry based on Q10 regulations. SOPs, Deviation/Non-conformance, Corrective and Preventative Action, Supplier Management, Change Management, Validation, and Process controls via Key Performance Indicators are explored. Focus is placed on the key areas for inspection readiness and robust Quality Systems development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**QARA 5575. Regulatory Sciences: Managing the Guidelines to Quality. 3 Credit Hours.**

The International Conference on Harmonization (ICH) has revolutionized the format and content of global regulatory filings with the Common Technical Document (CTD). Recent FDA draft guidelines have incorporated and expanded upon concepts described by the ICH. As the term "guideline" implies, such documents should not be generally viewed as regulations, but as "recommendations" to consider when developing the body of scientific information. Proper interpretation of the guidelines based on sound scientific principles is essential to optimize both the quality and quantity of information submitted to global regulatory agencies. Consequently, review of various ICH and FDA Quality guidelines will be supplemented by a discussion of the basic scientific principles that may influence implementation. After completing this course, students should understand the basic expectations set forth in various ICH and FDA Quality Guidelines. They should also realize that the guidelines are subject to interpretation and not definitive regulations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5576. Global CMC Issues and Regulatory Dossier. 3 Credit Hours.**

The course provides students with an in-depth knowledge of the major chemistry, manufacturing, and controls (CMC) issues facing the global pharmaceutical industry. Students learn the practical and theoretical skills necessary to develop successful CMC dossiers from the initial clinical application through marketing and post-marketing support. The class emphasizes long range CMC planning to combine technical and regulatory knowledge with strategic thinking. The class is designed for regulatory professionals, managers, and scientists with significant responsibility for CMC dossiers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5577. Global CMC Regulatory Compliance for Biopharmaceuticals and Other Biologics. 3 Credit Hours.**

This course provides an introduction to the chemistry, manufacturing and controls (CMC) topics involved in the development and licensure of biologic products (biopharmaceuticals, vaccines) in the US, Europe and other highly regulated world regions. Topics will be discussed from the perspective of Regulatory and QA requirements and expectations. Basic microbiology, cell biology and chemistry concepts will be reviewed with an emphasis on their practical application to product development and RA/QA. The class orients RA/QA professionals, managers and scientists responsible for biopharmaceutical CMC development and preparation of dossiers to the CMC content matter and technical issues that must be addressed in biologic product development and registration globally. Topics include adventitious agents testing, cell and seed bank testing methods and requirements, drug substance production via cell culture, protein and virus purification methods, control and analysis of process impurities, analytical methods and potency testing for characterization and release, strategy for specification setting for release and stability, comparability studies for biologics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in QARA 5459.

**QARA 5578. Benefit Risk Management and Safety Signaling of Healthcare Products. 3 Credit Hours.**

This course provides students with a basic understanding of the principles involved in developing, negotiating, and implementing Benefit-Risk Management Plans. While the focus will be on risk management plans intended for the EU and USA markets, the general principles are applicable across most regulatory jurisdictions in the world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (QARA 5571 or QARA 5538)

**QARA 5579. Regulatory and Legal Basis of Pharmacovigilance. 3 Credit Hours.**

This course reviews key regulations and the regulatory framework that influence the development and management of a pharmacovigilance system. While the main emphasis is on ICH regions, systems in emerging countries are also included, including the impact of the changing regulatory landscape on both manufacturers and regulators. Discussions include partnership agreements, pharmacovigilance aspects of due diligence, licensing and acquisitions, and product liability issues. In addition, students learn key aspects of drug safety and pharmacovigilance; FDA and EMA guidances that shape pharmacovigilance practices; the merits and deficiencies in the U.S. AERS database system in comparison to the European Eudravigilance data base; differences between the U.S. periodic reports (including periodic safety update reports, development safety update reports, and others as mandated); the impact of key regulatory reforms on pharmacovigilance (Brexit and GDPR); and product liability issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5591. Global Regulatory Affairs. 3 Credit Hours.**

This course provides a detailed analysis of the regulatory processes for new drug approvals outside of North America. Students gain experience in comparing the European and Japanese registration trends with those of the United States. Future regulatory structures in the major world markets are explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5592. Food and Drug Law. 3 Credit Hours.**

This course studies the governance of intra- and interstate commerce in foods, drugs, cosmetics, and medical devices and the effects of the Federal Food, Drug and Cosmetic Act upon research, manufacture, marketing, and distribution of drugs. Note: This course is required for the M.S. in RA and QA and for the Drug Development Certificate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5594. Regulation of Dietary Supplements and Functional Foods. 3 Credit Hours.**

Functional foods and dietary supplements have been a fast growing segment of the food market for the last half a decade owing to the aging demographics and scientific research demonstrating their effect on health. Regulation and judicial decisions have been influential for dietary supplement companies in producing and marketing their products. An understanding of how these regulation work and what influence they have on dietary supplement regulatory policy is critical. This course will provide information on the history of the regulation in the US and an in-depth look at the current regulatory outlook for these products in the US and in other select countries/regions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5595. Food Law. 3 Credit Hours.**

While Food and Drug Law (QARA 5592) briefly touches on food law, this course examines the major federal statutes and regulations applicable to food in more detail through class discussion and workshops. While emphasis is placed on the role, policies, and regulations of FDA, the practical working relationships and obligations between the food industry, the USDA, and other government agencies at the state and local level are also examined. Pertinent landmark judicial decisions and concepts are presented relating to regulation of food and enforcement action against adulterated food. The Food Safety Modernization Act (FSMA), the most sweeping reform of U.S. food safety laws in more than 70 years, is studied, including new enforcement tools granted to FDA. Preventive Controls for Human and Animal Food, which are revolutionizing food safety programs across the globe, are extensively studied and illustrated. The student project focuses on conducting a Hazard Analysis for a particular food product.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5596. Food Labeling and Regulatory Affairs. 3 Credit Hours.**

This course provides students with an in-depth understanding about how food in the U.S. must be labeled. Students learn about the food label and its mandatory components, as well as problems associated with incorrect or deceptive labeling. Rules issued under the Food Safety Modernization Act (FSMA), such as Sanitary Transportation, Protection Against Intentional Adulteration, Produce Safety, Foreign Supplier Verification Program, and Accredited Third Party Certification are thoroughly studied. The course describes regulatory affairs functions in the food industry, including food facility registration, importing, FDA inspections, record keeping, reporting and recalls. Workshops throughout the course illustrate important labeling and FSMA concepts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (QARA 5592 or QARA 5595)

**QARA 5597. Food Good Manufacturing Processes. 3 Credit Hours.**

This course covers FDA-enforced cGMPs (current Good Manufacturing Practices) through class discussion and workshops. Food safety regulations under the Food, Drug, and Cosmetic Act are covered as well as their impact on personnel, facilities, equipment, and production. Major foodborne pathogens are discussed, followed by control strategies, such as formulation and thermal processing. Emphasis is placed on preventing foodborne hazards via an understanding of sanitation measures, allergen control, acidification and low-acid canning. A risk-based approach to controlling hazards is presented using HACCP (Hazard Analysis and Critical Control Points) principles, from which new Preventive Controls regulations were derived. The student project focuses on evaluating food safety concerns when an FDA inspection reveals a total quality failure.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5598. Regulatory and Safety Requirements for Developing New Innovative Food Ingredients. 3 Credit Hours.**

Many innovative and new food ingredients are being introduced for use in the food industry. Each new ingredient must meet current regulatory and safety requirements. This course provides an overview of the regulatory and safety evaluation of food ingredients, including the regulatory approval processes. Topics include the requirements and submission process for innovative ingredients in the U.S., Canada, EU and other global regions. Discussions include global strategies for food ingredient approval, including petition procedures for JECFA and the Codex Alimentarius Commission. The course emphasizes the U.S. Generally Recognized as Safe (GRAS) system, exploring the controversial issues associated with this unique regulatory process. Self-regulatory schemes for ingredients such as flavors and enzymes will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5599. Clinical Aspects of Pharmaceutical Medicine. 3 Credit Hours.**

This course offers students a basic understanding of the disease processes most prevalent in Western culture. Students gain an appreciation for the epidemiology and demographic patterns of disease and their societal and economic impact. In addition, students gain a basic understanding of the etiology and the pathophysiology underlying the disease processes and the role of pharmacologic intervention.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5601. Industry Interactions with FDA/Health Authorities. 3 Credit Hours.**

Presenting a global perspective by reviewing the drug approval process in the European Union (EU), this course introduces students to the importance of establishing liaisons with officials with the U.S. FDA and other world health authorities. The rapport developed with health authorities frequently lessens the time it takes to get a new drug to market. How a firm presents its data can contribute as much to the successful relationship with health authorities as the quality of data presented. Areas include: FDA organization, average workload analysis with FDA, FDA review and drug approval process, national versus mutual recognition versus centralized approval process in the EU, user fees, company "personalities," FDA/Industry meetings, inspections, Advisory Committees, IND/NDA classification system, FDA initiatives to speed drug approval including electronic submissions, and notable internet regulatory addresses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5605. Advanced Topics in Food and Drug Law. 3 Credit Hours.**

This course expands the regulatory concepts covered in QARA 5592. Each semester the specific topics change.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5606. Regulatory Strategy: Discovery to Approval. 3 Credit Hours.**

A regulatory strategy is a key component of a therapeutic product's development. It is imperative to create a regulatory strategy early in the development process to consider such critical factors as the correct indication, size of the treatment population, cost and extent of clinical studies, and potential market for the product under consideration. The regulatory strategy should be developed as soon as the target product profile (TPP) is determined. Considering the enormous investments companies incur when launching new products, any regulatory strategy must be well thought out, reviewing existing patents, current regulatory intelligence, and pricing issues. This course covers the development and execution of product approval strategy from discovery to marketing approval. Class discussions include analyses of successful product launches as well as ones that failed due to insufficient regulatory strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5611. Regulation of Advertising and Promotions. 3 Credit Hours.**

This course reviews the regulatory and legal fundamentals of advertising and promotion of FDA-regulated prescription products. Emphasis will be placed on prescription pharmaceuticals and the current regulatory and legal environment. Discussions include how prescription drug regulations differ from those applicable to OTCs (over-the-counter drugs), biologics and restricted medical devices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in QARA 5533.

**QARA 5612. Bioethics for Pharmaceutical Professionals. 3 Credit Hours.**

This course focuses on bioethical issues arising in the regulation and conduct of research. It instills a basic understanding of bioethics and the theories and principles underlying its practices and application to research. It also discusses how bioethical theories and principles provide the foundation for many research regulations. Starting with a brief history of research ethics and regulation, it explores past and present ethical research controversies. Note: This course is required for the Certificate in Clinical Trial Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5615. Project Management for Pharmaceutical Professionals. 3 Credit Hours.**

This course discusses the strategic positioning of drugs, specifically focusing on domestic and international registration strategies. It explores why a company seeks a particular indication in labeling and how RA/QA professionals play a critical role in understanding and developing regulatory intelligences. It covers how project teams should be created, including the effective clarification of roles and responsibilities, so regulatory timeliness can be achieved. Workshops include an overview of project planning tools, techniques and critical path management, including negotiating registration strategies with the FDA and foreign agencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5616. Accelerated Regulatory Pathways: From Fast Track to Reliance. 3 Credit Hours.**

Facilitated Regulatory Pathways (FRPs) are regulatory approaches used by ministries of health to accelerate the development and assessment of new products or reduce the burden of duplicative regulatory activities, helping to make the development and assessment of safe, effective, quality medicines more efficient and timelier often through reliance or recognition mechanisms, thereby promoting efficient access to important medicines worldwide. This course has been designed to help the student understand the evolution of and distinguish the characteristics of FRPs used by ICH and maturing regulators. Participants will learn how to apply these to real-world global drug development programs. Students will investigate how to apply the concept of Return on Investment for the use of FRPs, as these apply to companies and agencies and will gain an understanding of how the data requirements for FRPs and the acceleration of authorizations through these pathways have implications for agencies, patients, payers and health technology assessment bodies. A combination of presentation styles will be used: lecture by the instructor and invited international speakers; interactive questions will be posed by the presenter to the students; each week selected students will be asked to prepare a 10-minute overview of a recently published manuscript/research paper/policy document that will relate to the topic of the session and will help students familiarize themselves with important advances in the field of FRPs; and an in-session discussion will be presented by the course instructor based on the reading homework, and practical applicability of the learnings from the publication will be stressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in QARA 5459.

**QARA 5618. Clinical Data Management (CDM). 3 Credit Hours.**

Data management is the activity of collecting, reviewing, organizing, and analyzing data from clinical research studies. The data from clinical research studies are the crux of a regulatory submission for a new drug or biologic. There is no basis for a therapeutic claim without data. Thus the success of a submission depends on quality data management practices and strict adherence to regulatory requirements. This course teaches students how to go from collecting data for the first protocol to ultimate submission to a regulatory agency from data collection, management, and reporting perspectives. Note: This course is required for the Certificate in Clinical Trial Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5621. Regulatory Bioanalysis. 3 Credit Hours.**

This course covers several broad topics: (1) a high-level quantitative analysis of biological samples that provide data to support pharmaceutical drug/biological product approval, (2) detailed instruction of FDA and EMA regulations and guidances that govern bioanalytical method development, validation and application in routine sample analysis, (3) "best practices" recommended for implementing quality management systems in a bioanalytical laboratory, and (4) discussion of approaches to address common problems that may arise during method validation and sample analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5622. Unit Operations. 3 Credit Hours.**

This course will expose students to the current process steps common to the manufacture of modern pharmaceuticals. In particular, the key variables for each step of a process will be discussed. Each class will feature a specific process common to pharmaceutical processing. Specific variables will be discussed, including an analysis of each process. At the end of the course the student should be able to describe a process by a series of smaller operations, describe the key variables for each small operation, identify key limitations of time and resources in proposed processes, and provide constructive improvements to complex processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5625. Process Analytical Technology (PAT). 3 Credit Hours.**

The course focuses on state-of-the art utilization of process controls, including multivariate methods and feed-back loops. It will investigate analytical tools, including thermal conductivity, NIR, and Raman spectroscopy. It will also cover process analysis and feedback, as well as batch record analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5627. Statistical Design of Experiments (DOE). 3 Credit Hours.**

This course exposes students to the use of statistical methods for designing optimal processes used in industry, extensively using data sets and data charting. At the end of the course the student should be able to: create an experimental plan to optimize a process; create a screening study to limit the number of experiments; use surface methodology to set process specifications; and use specialized methodology for material analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5629. Process Monitoring. 3 Credit Hours.**

This course reviews Control Charting, Six Sigma, Root Cause Analysis, Risk/Benefit Analysis, Process Capability, and Process Efficiency/Lean Manufacturing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 5650. Special Topics in Regulatory Affairs and Quality Assurance. 3 Credit Hours.**

Special topics as announced.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**QARA 5655. Analytical Chemistry in Pharmaceutical Laboratories. 3 Credit Hours.**

This course provides an overview of laboratory operations and the critical role of an analytical scientist. It reviews regulatory requirements for pharmaceutical lab operations and provides a framework for quality in a drug development laboratory. Although the course is designed for pharmaceutical scientists, many of the operations discussed are applicable to the chemical and environmental industries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**QARA 8001. Principles of Drug Action/PK. 3 Credit Hours.**

This course presents the fundamental principles of pharmacology, medicinal chemistry, and pharmacokinetics needed to understand their application in drug discovery and developmental processes. The material, presented in an integrated manner, includes the molecular mechanisms of drug action, structure-activity relationships, and the time-course of drug absorption and disposition.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 8002. Pharmaceutical Analysis. 3 Credit Hours.**

Application of chemical analysis as it relates to pharmaceuticals and pharmaceutical manufacturing. Classical separation methods including GC and HPLC, as well as hyphenated techniques (GS-MC and HPLC-MC) will be explored. Students will also be introduced to newer immunologic antibody-based procedures and emerging technologies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 8003. Preformulation - Small Molecules. 3 Credit Hours.**

Preformulation research of small molecules is the foundation of pharmaceutical manufacturing. Inadequate understanding of the physical/chemical and biophysical properties of drug substance or excipient can lead to the development of formulations and manufacturing processes that are not robust. The ability of a company to demonstrate to health agencies a firm understanding of the "manufacturing science" related to the production of each dosage form is essential. This course describes the evolution of preformulation from a science dedicated to primarily characterizing basic drug substance and excipient attributes as they relate to the finished product to the science of understanding, utilizing and controlling such properties to optimize the manufacture and bioavailability of a dosage form. The influence of preformulation data in the era of Quality by Design (QbD) and expectations for outstanding science from global health authorities will be incorporated throughout the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 8004. Pharmaceutical Manufacturing II: Solid Dosage Forms. 3 Credit Hours.**

This course presents the comprehensive, integrated, and most up-to-date methods, processing, and principles as they apply to solid dosage form design and product development. Conventional and specific techniques of industrial pharmacy, including direct compression, wet and dry granulation, fluid bed and coating operations, tableting machine instrumentation and compatibility measurements, and solid product evaluation will be presented. Novel oral dosage forms and technologies associated with solid products as well as product quality and performance assessment will be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**QARA 8006. Physical Pharmacy I. 3 Credit Hours.**

The emphasis of this course is to form a bridge between the concepts of physical pharmacy and the application of pharmaceutical sciences. Students will understand basic aspects of intermolecular forces, physical properties of solutions, ionic equilibria, buffers and isotonic solutions, solubility and partition phenomena, complexation and protein binding, reaction kinetics, mass transport, dissolution phenomena, interfacial phenomena, and rheology. Pharmaceutical applications based on the basic principles will be discussed as well. Students will be expected to be able to apply the basic concepts from this course to typical formulation and stability issues of pharmaceutical dosage forms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**QARA 8007. Applied Biopharmaceutics. 3 Credit Hours.**

This course considers the interrelationship of the physicochemical properties of the drug, the dosage form, and the route of administration on the rate and extent of systemic drug absorption. Drug absorption mechanisms, physiological and GIT constraints on dosage form transit and bioavailability, effect of formulation parameters, dissolution methodologies, in-vitro/in-vivo correlation of drug product performance as well as PAC, ICH and FDA guidelines on development and approval process will be covered. Formulation strategies for optimum therapeutic outcome via application of pharmaceutical sciences to the design of drug delivery systems is provided.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Philosophy (PHIL)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PHIL 5210. Special Topics in Philosophy. 3 Credit Hours.**

Arranged each semester. Please consult the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 5211. Intermediate Logic. 3 Credit Hours.**

This course will go through the soundness and completeness proofs for a first-order deductive system (i.e., the kind used in intro logic). The main goal of the course will be to deepen the students' understanding of logic by acquainting them with these formal results. But we'll also try to spend a little time on some philosophical issues (e.g., what, if anything, does logic have to do with reasoning).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5216. Philosophy of Science. 3 Credit Hours.**

Basic issues in the current philosophy of science, and particularly various accounts of such key notations of science as hypotheses, confirmation, laws, causation, explanation, and theories.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5217. Feminist Epistemology and the Philosophy of Science. 3 Credit Hours.**

This course explores the effects of gender on scientific creativity, method and decision making. Thomas Kuhn, in *The Structure of Scientific Revolutions* (1962), was one of the first to show that political, social and psychological factors affect scientific change. Feminist criticisms of science, developed over the last thirty years, are one way in which his views have been developed. We will examine cases from a wide range of sciences to see where, and how, gender influences scientific practice. The complex relations between gender, race, class and nationality will also be discussed in relation to these issues. Central questions of the course will be: How pervasive is gender bias in science? Can gender bias be eliminated, and is it desirable to do so? Does the reduction of gender bias require an increased representation of women in science? Can the popular view that science is objective, truth-seeking and progressive be maintained in the face of findings of gender bias? We will read from the work of Evelyn Fox Keller, Donna Haraway, Sandra Harding, Helen Longino, Alison Wylie and others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5218. Philosophy of Medicine. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5221. Social and Political Philosophy. 3 Credit Hours.**

Arranged each semester. Please consult the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5222. Contemporary Ethical Theory. 3 Credit Hours.**

Issues in ethical theory that have come to prominence in the 20th century. Both meta-ethical issues (about the meaning and justification of ethical statements) and normative issues (about obligation, responsibility, and goodness) will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5223. Feminist Ethics and Political Philosophy. 3 Credit Hours.**

An examination of feminism's contribution to ethics, political philosophy, and legal theory. Issues may include: the role of care versus that of justice in determining moral obligations; the nature and causes of women's oppression (including the difference between the sexual oppression experienced by white women and the additional forms of oppression to which women of color/third-world women are subject); pornography and prostitution; equality and difference; essentialism as it pertains to gender and race; feminist jurisprudence; postmodern feminism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5225. Metaethics. 3 Credit Hours.**

The course examines the foundations of ethical value, including the metaphysics of ethical value, the semantics of ethical language, normativity, and the relation between kinds of value such as instrumental, final, intrinsic, and extrinsic as well as personal, ethical, moral, and prudential.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5226. Classics in Moral Philosophy. 3 Credit Hours.**

The course will introduce students to Greek ethical thought through seminal texts in this genre.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5229. Philosophy in Literature. 3 Credit Hours.**

Selected philosophical themes as they appear in classical and modern literature. Frequently the themes concern the "enlightenment project," "modernism," and their critics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5230. Special Topics. 3 Credit Hours.**

Arranged each semester. Please consult the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 5232. History of Aesthetics. 3 Credit Hours.**

A study of major works in the history of aesthetics selected from such philosophers as Plato, Aristotle, Hume, Kant, Schopenhauer, Hegel, Dewey, Bell, Collingwood, Beardsley, Langer, Dickie, Danto, and contemporary figures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5233. Problems in Aesthetics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5235. Classics in Moral Philosophy II. 3 Credit Hours.**

A study of the major works in the history of moral philosophy selected from among the writings of such philosophers as Plato, Aristotle, Hobbes, Spinoza, Hume, Kant, Mill, Nietzsche, Moore.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5240. Special Topics. 3 Credit Hours.**

Arranged each semester. Please consult the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 5241. Theory of Knowledge. 3 Credit Hours.**

An examination of knowledge and belief. The specific subtopics involving them include truth, perception, innate ideas, justification, induction, the priori, mathematical knowledge and rationalism versus empiricism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5242. Metaphysics. 3 Credit Hours.**

An examination of the most general features of the universe. Topics include the character of truth, the existence of abstract entities, the nature of persons, free will, the existence or non-existence of God, ontological commitment, the relation of philosophy to science, causation, modal properties, reality and appearance, and various forms of realism and anti-realism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5243. Philosophy of Law. 3 Credit Hours.**

An introduction to philosophical problems arising in the examination of legal statements, including questions and theories about the nature of law itself, about legal responsibility and legal punishment, and about standards of fairness in settling legal disputes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5244. Philosophy of the Mind. 3 Credit Hours.**

An examination of the character of mental and psychological states. Specific issues may include the nature of persons, relations between natural and psychological sciences, action, mental content, and its relation to language.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5249. Ethics in Medicine. 3 Credit Hours.**

Exploration of ethical issues generated by the application of scientific and technological advances to the preservation, destruction, and programming of human life. Topics may include: ethics of medical research, abortion, euthanasia, behavior control, allocation of scarce medical resources, and the ethics of patient-physician interaction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5250. Topics in the Philosophy of Psychology. 3 Credit Hours.**

The course examines select topics in the philosophy of psychology such as philosophical treatments of the nature of cognition, perception, and sensation, as well as emotion, intention, action, and moral psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 5251. Philosophy of Language. 3 Credit Hours.**

This course focuses on philosophical topics concerning the nature of language. Broadly, these topics include semantics (theory of linguistic meaning), syntax (theory of linguistic structure), and pragmatics (theory of linguistic use). The precise content varies according to the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**PHIL 5253. Philosophy of History. 3 Credit Hours.**

Problems of historical knowledge, e.g., problems about the historian's claim to explain historical events (causation in history, reasons for actions, challenges to the objectivity of history) and problems about historical interpretation (including global interpretations of the historical process, such as Augustine's, Kant's, and Hegel's.)

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5269. Contemporary British and American Philosophy. 3 Credit Hours.**

Selected topics in 20th and 21st century English-speaking philosophy, varying according to instructor and semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5271. Nineteenth-Century Philosophy. 3 Credit Hours.**

Selected European philosophers from Hegel to Bradley.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5272. Philosophy of Culture. 3 Credit Hours.**

The purpose of this course is to address central themes in philosophy of culture, such as philosophical problems raised by the notion of cultural conditions of possibility, the relation of mythic knowledge to scientific and philosophical knowledge, the role of signs and symbols in theories of culture, the philosophical significance of psychoanalysis, and the distinction between a philosophical anthropology and anthropological theory. This course will be topical in nature, which means that it can be taken each year as different dimensions of the subject receive focus.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5273. Greek Philosophy. 3 Credit Hours.**

Interpretation and critical examination of the dialogues of Plato and the works of Aristotle.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5274. Pragmatism and American Thought. 3 Credit Hours.**

American pragmatism and naturalism, with emphasis on Emerson, James, Peirce, Mead, Dewey, and contemporary pragmatists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5275. British Empiricism. 3 Credit Hours.**

Selected topics in 17th- and 18th-century philosophers such as Locke, Berkeley, Hume, and Reid.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5276. Contemporary Continental Philosophy. 3 Credit Hours.**

Phenomenology and existentialism, with emphasis on such 20th century philosophers as Husserl, Heidegger, Sartre, Merleau-Ponty, Foucault, Derrida, and other post-structuralists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5278. Continental Rationalism. 3 Credit Hours.**

This course is devoted to selected topics in 17th- and 18th-century philosophers in the Rationalist tradition such as Descartes, Spinoza, and Leibniz.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 5279. Kant. 3 Credit Hours.**

In depth study of some of the major critical writings of Kant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8602. Seminar in Greek Philosophy. 3 Credit Hours.**

This course will examine Greek philosophical conceptions of pleasure and hedonism. We will begin with some Presocratic material, then move to Plato (selections from Gorgias, Protagoras, Republic). We will examine Plato's Philebus in its entirety. Thereafter, we will look at Aristotle's treatments in Nicomachean Ethics VII and X, including Eudoxus' arguments, as well as Rhetoric I. Finally, we will consider the hedonism of the Cyrenaics and Epicureans.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8611. Seminar in Continental Rationalism. 3 Credit Hours.**

Selected topics in 17th- and 18th-century philosophers such as Descartes, Spinoza and Leibniz.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8616. Seminar in British Empiricism. 3 Credit Hours.**

Selected topics in 17th- and 18th-century philosophers such as Locke, Berkeley, Hume, and Reid.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8621. Seminar in Kant. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8626. Seminar in Nineteenth-Century Philosophy. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8631. Seminar in Contemporary Continental Philosophy. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8641. Seminar in American Philosophy. 3 Credit Hours.**

Selected topics in the thought of American philosophers, especially the American pragmatists such as James, Dewey, and Pierce.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8666. Seminar in Philosophy of the Social Sciences. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8701. Seminar in Aesthetics. 3 Credit Hours.**

The general plan of the seminar is to explore the master thinkers of continental aesthetics from an analytic vantage and against the dominant themes of Anglo-American aesthetics. I anticipate drawing on a good selection of continental authors and a specimen or two of a more sustained treatment. This would involve, for instance, a selection among the classic figures spanning Kant and Hegel, phenomenology, hermeneutics, structuralism, post-structuralism, and the Frankfurt-critical school at least. Proposals of topics or figures are welcome.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8712. Seminar in Ethics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8721. Seminar in Social and Political Philosophy. 3 Credit Hours.**

This seminar will examine three core approaches in contemporary political philosophy--Rawlsian contractarianism, Habermasian critical social theory, and feminist political theory--and will critically analyze the strengths and weaknesses of each through a study of their main exponents. Since recent controversies in social and political philosophy have tended to focus on global issues, some attention will be given to how these three approaches address questions of global justice, political ecology, and cooperation and solidarity across borders. The seminar will proceed through a close study of key texts from each approach and will involve oral presentations by participants and an original research paper. Readings will include John Rawls, Thomas Pogge, Jurgen Habermas, Iris Marion Young, Alison Jaggar, and Nancy Fraser.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for a total of 6 credit.

**PHIL 8731. Seminar in the Philosophy of the Mind. 3 Credit Hours.**

Examination of current views of such topics as materialistic accounts of mind, intentionality, the analysis of specific mental phenomena (e.g., belief, consciousness, emotion, desire), ascription of mental attributes to machines.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8741. Seminar in Epistemology. 3 Credit Hours.**

For the most part, we will closely study disputes surrounding foundationalism. Originally a theory about justified belief, foundationalism has become a watchword in wider cultural wars. Because its wider use is not wholly unrelated to its original use in the theory of knowledge, it is certainly something on which we should try to achieve clarity. A recent anthology entitled *Contemporary Debates in Epistemology*, edited by Matthias Steup & Ernest Sosa contains essays, pro and con, on various aspects of this issue, written by a number of leading epistemologists, and with both defenses and critiques of each of the positions involved. The topics in the anthology cover, among other things, the nature of justification, a priori knowledge, perception, skepticism, the ethics of belief, truth, and context. The hope is that we can work through the 11 sections of this text to achieve a better grasp of the issues and their broader implications for our understanding.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8746. Seminar in Metaphysics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 8755. Seminar in the Philosophy of Language. 3 Credit Hours.**

This course is devoted to topics in the philosophy of language such as meaning, reference, metaphor, speech-act theory, and vagueness.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHIL 9882. Tutorial. 1 to 3 Credit Hour.**

Independent study for graduates with a professor within the department, usually their advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 9982. Tutorial. 3 Credit Hours.**

Independent study for graduates with a professor within the department, usually their advisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Registration required each semester after Preliminary Examinations while researching the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHIL 9999. Dissertation Research. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Physical Therapy (PHTH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PHTH 8101. Introduction to Physical Therapy. 1 Credit Hour.**

This course introduces students to the concepts of professionalism, advocacy and the role of the physical therapist in the American health care system. Students will learn about the American Physical Therapy Association, its role in advancing the profession of Physical Therapy, and the resources available through the organization. In preparation for clinical practice students will be introduced to various documentation strategies including electronic health records.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8102. Teaching, Learning, Group Dynamics. 2 Credit Hours.**

The course is designed to assist the student physical therapist in improving his/her clinical and behavioral teaching, learning, and group dynamics skill sets through activities, lectures, and group projects. The first part of the course provides instruction to the student about group dynamics. Therapists, regardless of employment location, must work in harmony with many disciplines to achieve patient goals. Teamwork and inter-professional communication are critical factors in accurate clinical decision making. Trust, leadership, dependency, group dynamic theory, and inclusion are explored in the first half of the course within the framework of the inter-professional team approach to the provision of health care. The second part of the course focuses on behaviors and teaching skills associated with the therapist-patient interaction. Students are also encouraged to reflect on their individual learning preferences and strategies for optimizing success in the classroom and clinical environments. Topics explored include the patient-therapist collaborative clinical decision model, patient education, the FOG index of teaching, verbal and written clinical teaching methodology, teaching pedagogy, distance medicine, interaction with patient families, long and short term goal setting, clinical objectives and clinical education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8103. Clinical Examination and Intervention Skills I. 2 Credit Hours.**

This is the first course in a 3-part sequence of Clinical Examination and Intervention Skills. This course includes a lecture component and lab activities. Clinical Examination and Intervention Skills (CEIS) 1 is offered as a 2 credit lecture/lab course during summer of the initial term of the DPT curriculum. The CEIS course sequence provides instruction in and practice of examination and intervention skills that can be applied to a wide variety of clinical settings and patient populations. CEIS 1 focuses on building a foundation of skills that foster increasingly complex clinical-decision making throughout the next two courses in the CEIS sequence.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8105. Human Anatomy I. 6 Credit Hours.**

This course represents the composite lecture and lab components of the regional study of the gross structure of the human body. It includes classroom lecture, laboratory, and dissection activities regarding anatomical considerations for the back, upper and lower limbs, thorax, head and neck, abdomen, pelvis, and perineum. Emphasis is on the structure and function of the skeletal, muscular, cardiovascular, respiratory, and peripheral nervous systems, including their embryologic development. Students must learn origins, insertions, actions, and both spinal cord level and peripheral innervations. In addition, students must know all bony landmarks, ligaments, and tendons that support the joints under study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8107. Functional Biomechanics. 3 Credit Hours.**

Functional Biomechanics is offered as a 15-week, 3-credit course during the fall semester of the first year of the DPT curriculum and represents a course that provides an initial bridge between anatomy and physiology of the neuromusculoskeletal system, and the biomechanics of movement. The course is designed to help the DPT student understand the complex nature of human movement by using various types of models to establish a biomechanical foundation from which movement can be analyzed. Students will be expected to identify, comprehend, and apply some movement models that can be appropriately generalized across multiple portions of the body and do likewise for specific movement models of specific joints, body segments or tasks such as posture, standing and basic movement patterns.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8109. Human Physiology and Pathology I. 3 Credit Hours.**

This is the first in a two-course series designed to provide first-year doctor of physical therapy students with a basic understanding of the following: normal adult human physiology, basic pathology (injury, inflammation, healing and adaptation), normal microanatomy of skin, bone and connective tissue and pathology of the cardiac, pulmonary, immune, endocrine, musculoskeletal and integumentary systems. The topics to be discussed will provide a frame of reference for the various pathophysiological states encountered by the contemporary, practicing physical therapist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8111. Clinical Examination and Intervention Skills II. 3 Credit Hours.**

Clinical Examination and Intervention Skills 2 (CEIS 2) is the second in a sequence of courses that includes theory and evidence for, and practice of, examination and intervention skills that can be applied to a wide variety of client populations seen by physical therapists. The CEIS 2 lecture and laboratory course provides a framework for upper quarter assessment and intervention. Students are expected to synthesize content from the CEIS 1 course to expand critical thinking and problem-solving with respect to clinical decision making. Additionally, this course provides the student a foundation in the basic theory and science of exercise and a central framework by which to prescribe and modify therapeutic exercise to a variety of clients.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.



**PHTH 8113. Evidence Based Practice I. 2 Credit Hours.**

This is the first course in a three-course series. Evidence Based Practice I provides an introduction to the critical analysis of professional literature in preparation for practical implementation evidence based practice. Students will learn how to conduct searches of scientific and professional literature on specific topics related to physical therapy, judge the validity of information obtained through both print and electronic media, and assess the internal and external validity of research articles as sources of information on which to base clinical decisions. Students will also learn how to use web-based technology to maintain a personal database of references and prepare reports of research-based literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8114. Neuroscience. 3 Credit Hours.**

Students will first learn basic neuroanatomical and brain vascular structures, their relationships to other neuroanatomical structures as well as basic neuroembryology, neurohistology and neurophysiology. Next, students will learn regional neuroanatomy and the main function of each regional structure, building on their new knowledge of neuroanatomy using case histories as a learning tool. Lastly, students will learn systems neuroscience, which focuses on how the regional brain structures connect and function as integrated sensory, motor, cognitive, and emotional processes, again using case histories as a learning tool. Thus, lectures, computer based labs and wet brain labs, interactive sessions and case histories comprise this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8115. Human Physiology and Pathology II. 3 Credit Hours.**

This is the second in a two-course series designed to provide first-year doctor of physical therapy students with a basic understanding of the following: normal adult human physiology, basic pathology (injury, inflammation, healing and adaptation), normal microanatomy of skin, bone and connective tissue and pathology of the cardiac, pulmonary, immune, endocrine, musculoskeletal and integumentary systems. The course work is didactic with no laboratory component. The topics to be discussed will provide a frame of reference for the various pathophysiological states encountered by the contemporary, practicing physical therapist.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8116. Motor Control and Learning. 3 Credit Hours.**

In this course theories and basic principles of motor control and learning will be integrated and related to motor behaviors observed in individuals with or without sensory and motor impairments. The students will gain experience in observing and measuring human motor behavior, which will focus on postural control, locomotion and goal-directed manual tasks. The students will learn to perform task analysis on motor skills as a method to analyze movement behavior and allow them to apply practice principles to enhance motor learning in individuals with or without sensory or motor impairments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8118. Clinical Examination and Intervention Skills III. 3 Credit Hours.**

This lecture and laboratory course is the third of a 3-part sequence and takes place during the spring semester of the first year of the doctor of physical therapy program. The CEIS 3 course provides a continuation of assessment and intervention initiated in CEIS 2 through a systematic progression of the lower extremities. Students will additionally incorporate practice of a thorough neurologic examination and balance assessment within the scope of physical therapy practice. Exercise physiology concepts are more deeply discussed, and students will be expected to demonstrate an understanding of muscle physiology in response to exercise as well as concepts surrounding aerobic assessment. Students are expected to synthesize content from the first two courses in the CEIS sequence to expand critical thinking and problem-solving with respect to clinical decision making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8121. Clinical Electrophysiology and Biophysical Agents. 3 Credit Hours.**

Electrophysiology & Biophysical Agents includes the known physiologic and physical effects, and application, of select thermal and electrical modalities (therapeutic modalities). A problem-solving approach is used to assist the student to integrate basic physiologic, physical and medical science aspects for the safe application of the modality. Electrodiagnostic testing in the context of physical therapy practice will be presented. Validity, reliability, sensitivity and specificity of select clinical tests and the effectiveness of each thermal modality/electrotherapeutic device will be addressed. Students will actively engage in the use of each modality through laboratory sessions to inform clinical decision making and demonstrate skill of device usage.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8123. Development Across the Lifespan. 2 Credit Hours.**

Lifespan (PHTH 8123) offered as a combined lecture and laboratory based course consisting of the equivalent of 1 credit laboratory experiences (30 Hours) and 1 CH of lecture (15 hours) during the summer semester of the 2nd year of the Doctor of Physical Therapy curriculum. This course represents the integration of the skills and knowledge acquired from Biomechanics and Motor Control and Learning, the clinical examination and intervention courses, as well as the musculoskeletal and neuromuscular series of clinical management courses taken concurrently. This course builds upon the basic science and theory of previous coursework to allow an understanding of the mechanisms that define human movement and allow for interaction of the individual with their environment across the lifespan. A large focus of the course will be the typical trajectory of motor development (pediatrics through geriatrics) and pathologic effects which occur through the lifespan on an individual's ability to move and interact with their surroundings. The laboratories also involve discussion and training on the use of the tests for motor development, balance and posture, gait, and upper extremity function, and are supplemented with pediatric, adult, and geriatric case studies to allow for the development of the skill set necessary to allow the student to apply the tests as used in lab to the clinical arena.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8125. Clinical Management of Musculoskeletal Conditions I. 4 Credit Hours.**

This is the first in a series of 3 courses in the clinical musculoskeletal management sequence. The course will build upon material from previous courses in the basic sciences and foundational clinical examination and intervention skills. Students will become proficient in a patient-centered, biopsychosocial approach to the management of patients with lower quarter musculoskeletal disorders using the current best evidence to inform clinical decision making. Students will learn a comprehensive lower quarter musculoskeletal examination scheme utilizing the most valid and reliable tests and measures. Students will learn to develop and carry out a plan of skilled physical therapy treatment interventions with an emphasis on manual therapy, therapeutic exercise, and patient education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8127. Clinical Management of Neuromuscular Conditions I. 4 Credit Hours.**

This course introduces DPT students to evidence-based practice specific to individuals with neuromuscular dysfunction. The student will apply the elements of examination, history, systems review, tests and measures, evaluation, diagnosis, prognosis, and interventions to individuals with various neuromuscular diseases and conditions using the International Classification of Function (ICF) model and clinical decision-making tools. The Task Oriented Approach and the Hypothesis Oriented Algorithm for Clinicians (HOAC II) will be emphasized. Students will gain further skill in examining and identifying impairments of the human movement system and limitations in functional activities associated with neuromuscular disorders. An emphasis will be placed on designing effective interventions for individuals with stroke, traumatic brain injury (TBI), and spinal cord injury (SCI). Clinical case examples will highlight the acute and subacute rehabilitation patient management environments. Students will also be introduced to prevention and long-term management of chronic impairments and loss of function in these individuals. The course content will include pathophysiology, epidemiology, and medical and physical therapy management of stroke, TBI, and SCI. Physical therapy examination principles and skills will be presented and practiced, including disease specific and generalized tests and measures utilized with these patient populations. Students will apply content to clinical case studies to demonstrate integration within the cognitive and psychomotor domains of learning. Case study scenarios and clinical practical examinations will be utilized to assess knowledge translation to psychomotor and clinical reasoning skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8129. Psychosocial Aspects. 2 Credit Hours.**

The goal of this course is for students to develop a greater appreciation of the psychosocial aspects of disability and wellness. We will examine models of disability, systems affecting individuals with disabilities, psychosocial factors related to adjustment, and treatment and health-promotion models. Psychopathology and psychiatric disabilities will be examined, as well as mental health issues related to disease, chronic and acute illness, and injury.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8131. Clinical Management of Musculoskeletal Conditions II. 4 Credit Hours.**

This is the second in a series of 3 courses in the clinical musculoskeletal management sequence. The course will build upon material from previous courses in the basic sciences and foundational clinical examination and intervention skills. Students will become proficient in a patient-centered, biopsychosocial approach to the management of patients with lower quarter musculoskeletal disorders using the current best evidence to inform clinical decision making. Students will learn a comprehensive lower quarter musculoskeletal examination scheme utilizing the most valid and reliable tests and measures. Students will learn to develop and carry out a plan of skilled physical therapy treatment interventions with an emphasis on manual therapy, therapeutic exercise, and patient education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8133. Clinical Management of Neuromuscular Conditions II. 4 Credit Hours.**

The course focuses on progressive disorders and selected current topics in managing neuromuscular disorders. The diagnostic groups covered include: Huntington's disease, Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis, Alzheimer's disease, post-polio, Guillain Barre, myasthenia gravis, neurologic injuries due to infection or neoplasm, cerebellar and vestibular disorders. Examination, evaluation, diagnosis, prognosis and application of intervention will be addressed utilizing case studies to enhance application of cognitive and psychomotor skills within the lectures and laboratory experiences. The course will include epidemiologic data, pathophysiology, and medical management and lifespan changes typically seen in these disorders. Students will develop strategies to reduce barriers in the community and enhance optimal participation in patients with chronic neuromuscular conditions by identifying resources, preventing secondary impairments, addressing wellness, and personal issues. Students will learn to select appropriate outcome measures based on psychometric properties and patient related factors. The efficacy and effectiveness of interventions to address impairments and activity loss in individuals with neuromuscular disorders will be examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8135. Clinical Management of Cardiopulmonary Conditions. 3 Credit Hours.**

The course challenges students to translate information learned in Anatomy, Physiology, Pathophysiology, and Clinical Decision Making into clinical scenarios that will represent their future practice as it relates to rehabilitation and management of individuals with cardiopulmonary conditions. Because of the evolving role of physical therapists in the health care system (including primary care), students will be expected to recognize signs and symptoms of cardiovascular and pulmonary primary and secondary diseases as they impact on the patient/client's plan of care. Students are challenged to anticipate the consequences of cardiovascular and pulmonary disease based on data collected during clinical practice. Students will gain experience in the clinical monitoring of cardiovascular and pulmonary signs and symptoms through the use of the Clinical Simulation Center. Through the use of case studies, students will need to collect and interpret clinical data from robotic mannequins programmed to display a variety of clinical scenarios that will require clinical decision making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8136. Bioethics. 2 Credit Hours.**

This course provides an overview of the field of bioethics with special emphasis on areas of applicability for future physical therapists, including methods for decision-making and problem solving; autonomy; health disparities; distributive justice; informed consent and health literacy; professionalism and codes of ethics; violence; disability ethics; and the social determinants of health. Most weeks will include an ethics case study that students will analyze using models for clinical decision-making, the APTA Code of Ethics and Standards of Physical Therapist Practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8137. Evidence Based Practice II. 2 Credit Hours.**

This is the second course in a three course series. In Evidence Based Practice II, students will practice performing focused literature searches, documenting search strategies, evaluating the validity of clinical research studies using standard metrics and knowledge gained during Evidence Based Practice I, synthesizing multiple studies to answer a clinical foreground question, and providing a clinical bottom line. Students will work both independently and as part of a group to complete the course objectives. This course refines and allows for practice of skills needed to locate, understand, and critique research literature for clinical decision-making. Emphasis will be placed on methods used to find relevant literature and assess the validity of individual articles, systematic reviews and meta-analyses. As a result of the activities within this course, students will be able to conduct and document a focused search of the literature to answer a specific clinical question.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8138. Management and Healthcare Systems. 2 Credit Hours.**

Management and Healthcare Systems is an introduction to the American Healthcare system and management of physical therapy practice. The component of the Healthcare Systems will emphasize the interconnections between the various segments of the health care system and the impact of health literacy, access, safety, reimbursement, legislation and regulation. The course will also look at the impact of consumerism and its unique characteristics in health care. It will also explore and integrate the role of physical therapy as a profession and physical therapists as professionals in the system. Further emphasis will be on class participation as a method of modeling professional behavior. Management of Physical Therapy Practices (MPTP) represents a transitional learning experience by allowing the translation of bench and clinical knowledge gained during the first year of the DPT curriculum to the procedural and management framework of developing and maintaining a physical therapy clinical practice. The student will be expected to demonstrate an understanding of how patient care assessment and intervention algorithms can meld with the parameters of reimbursement, compliance, management hierarchy, ethics, and regulatory issues in the inpatient, wellness, and outpatient settings while allowing for individual and group therapist provision of quality care and the attainment of personal and professional goals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8139. Medical Diagnostics. 2 Credit Hours.**

Physical therapists are frequently called upon to make diagnostic decisions in both primary and tertiary care roles. Furthermore, diagnostic imaging information can impact the physical therapy plan of care. Physical therapists require a basic level of knowledge about diagnostic imaging including when and what imaging study may be indicated, how the information from diagnostic imaging impacts the evaluation and plan of care, and how to have an informed discussion about diagnostic imaging with both patients and colleagues. In the course, students will gain an appreciation for and begin to develop strategies to integrate data from medical diagnostic imaging procedures. These data will include results obtained from data derived from musculoskeletal, vascular, neurologic, cardiac and pulmonary imaging. The focus will be on utilizing clinical data that documents the status as well as the progression of disease and its impact on differential diagnosis, prognostication, and physical therapy interventions. The course meets weekly for lecture and discussion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8141. Clinical Management of Musculoskeletal Conditions III. 4 Credit Hours.**

This is the third in a series of 3 courses in the clinical musculoskeletal management sequence. The course will build upon material from previous courses in the basic sciences and foundational clinical examination and intervention skills. Students will become proficient in a patient-centered, biopsychosocial approach to the management of patients with spinal disorders using the current best evidence to inform clinical decision making. Students will learn a comprehensive spinal musculoskeletal examination scheme utilizing the most valid and reliable tests and measures. Students will learn to develop and carry out a plan of skilled physical therapy treatment interventions with an emphasis on manual therapy, therapeutic exercise, and patient education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8143. Management of the Medically Complex Patient. 3 Credit Hours.**

Medical acuity and medical complexity can present in a variety of environments. The intention of the course is for students to gain exposure to and develop strategies and skills in working with individuals with both medical/surgical acuity as well as complexity. Course work challenges students to interpret medical and/or surgical events/data and anticipate the impact of that information on an individual's function. Students develop plans of care while dealing with medical/surgical equipment and treatments that might be necessary for the patient's safety. In addition, students will be challenged to anticipate the impact of past medical/surgical history, pharmacology, social history, and resources in developing a plan of care. Since students encounter individuals with medical acuity and/or complexity across the health care delivery spectrum, students will develop strategies for collaboration and coordination of services with other health professionals. Because of the evolving role of physical therapists in the health care system, students will be expected to provide safe, effective, patient-centered, equitable, timely, coordinated and evidence-based care for these individuals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8145. Pharmacotherapeutics. 2 Credit Hours.**

The course exposes student to the importance of incorporating a patient's pharmacologic management into clinical decision making, prognosis and progression. Because of the evolving role of the physical therapist in the health care system, including primary care, students must recognize the importance and impact of pharmacologic effects on safe patient management. This course explores the essential principles of clinical pharmacology. Content includes pharmacokinetics, indications and contraindications of various drugs relative to their effect on diagnosis, prognosis and interventions in physical therapy. Specific pharmacologic categories covered in the course are cardiovascular medications, chemotherapeutic agents, NSAIDs, antirheumatic agents, pulmonary medications, pain management strategies, neuromuscular medications, ionto/phonophoresis agents, different classifications of steroids and diabetes management agents. Through interactive teaching-learning lecture and online methodologies, students critically review and analyze various clinical pharmacology issues at both the individual and societal levels. Discipline-specific assignments are used to correlate pharmacologic principles of particular relevance to a variety of health professions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8146. Clinical Management of Pediatrics. 2 Credit Hours.**

Pediatric physical therapy is practiced across a wide range of ages and developmental levels, within specialized environments spanning complex medical care to non-clinical setting such as school systems. The physiological changes associated with normal and atypical development, the interpretation of standardized assessments of development, imaging, and clinical decision making in the pediatric population will be discussed. The course content will also include pathophysiology, epidemiology, medical and physical therapy management of common pediatric conditions including neuromuscular, musculoskeletal and cardiovascular/pulmonary conditions across a variety of pediatric practice settings. Physical therapy examination principles and skills will be presented and practiced, including disease specific and generalized tests and measures utilized with these pediatric patient populations. Evidence based practice and clinical practice guidelines in pediatric physical therapy will be discussed and compared to adult physical therapy practice. The student will be expected to demonstrate an understanding of how physical therapy assessment and intervention strategies must be adapted to meet the unique needs and settings of the pediatric population. Students will be introduced to prevention and long term management of chronic impairments and loss of function across development. Topic content will be provided in seminar form with a short lecture followed by discussion and group work. Students will apply content extensively to case studies to demonstrate integration within the cognitive and psychomotor domains of learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8147. Clinical Pain Sciences. 1 Credit Hour.**

One in five individuals within the United States live with chronic pain. Physical therapists are well positioned to take a leading role in addressing the societal and individual burden of chronic pain. This course will equip the physical therapy student with contemporary knowledge and critical thinking to enhance their understanding, assessment, and management of patients with complex and persistent pain disorders. Using a combination of lecture and group discussions/activities this course will build upon foundational knowledge from physiology, neuroscience, psychosocial issues, bioethics, and the clinical management course series. The course will emphasize a person-centered assessment process using a biopsychosocial framework. Students will learn the clinical application of non-invasive, conservative management strategies including: pain education, self-management principles, cognitive behavioral techniques, and graded motor imagery.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8148. Assistive Technologies. 2 Credit Hours.**

This course represents a transitional learning experience for the third year student by allowing for the synthesis of clinical knowledge learned during the first two years of the DPT curriculum with technology meeting the needs of the International Classification of Functioning, Disability and Health (ICF) model. The student will be expected to demonstrate how patient care paradigms for the individual with a disability are not restricted to episodic care, but are tied into long term care and quality of life issues as well. The methods employed will explain to the student the concepts of AT within the traditional role of the physical therapist in assessing, prescribing, and adapting AT for mobility issues (prosthetics and orthotics). The course will also expand upon this foundation by explaining the concept of universal design and by expanding the discussion of AT to encompass such concepts as communication and cognitive aids, recreation, telerehabilitation and robotics, and most importantly, finding funding for AT. At the conclusion of the course, the student should be well prepared for the evolving role of the physical therapist to develop, maintain, and restore maximum movement, functional ability, and quality of life throughout the lifespan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8150. Elective - Special Topics. 1.5 Credit Hour.**

The physical therapy profession is a dynamic profession responding to changes in practice settings, health care policy, societal issues, and knowledge advancements. This course will cover topics that reflect current and anticipated needs in our profession that have emerged in current physical therapy practice. PHTH 8150 is an elective course for 3rd year Doctor of Physical Therapy students and is designed to contain content classified as above the standard of entry-level professional education in physical therapy. Topics offered vary across areas of specialized clinical practice and clinical research activities of departmental faculty members.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 8151. Evidence Based Practice III. 2 Credit Hours.**

This is the third course in a three course sequence. This course is designed to encourage use of the principles of evidence-based practice, integrating clinical expertise, patients' preference/values, and research evidence to produce a therapeutic alliance. In this course, students will develop a clinical question based on a case scenario, search the literature for research pertaining to the question, critically appraise the research, develop a clinical bottom line, and apply the research, along with sound clinical decision making taking into account the clinical context and individual patient preferences, to the case scenario. The students will develop a capstone presentation and deliver it during the Annual Temple DPT Student Presentation Day.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8152. Elective - Musculoskeletal. 1.5 Credit Hour.**

This laboratory-based experience will provide students with instruction, practice, and peer reviewed evidence concerning orthopedic manual physical therapy. This course will build upon basic techniques learned in the Musculoskeletal Management courses and address advanced clinical decision making. All of the major regions of the musculoskeletal system will be addressed including the spine and extremities. Techniques will include joint manipulation, soft tissue mobilization, and complementary exercise. All classes will be instructed by physical therapists with fellowship training in manual physical therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8153. Elective - Vestibular. 1.5 Credit Hour.**

This lecture-laboratory hybrid experience will provide students with instruction, practice, and peer reviewed evidence on key concepts within the arena of vestibular rehabilitation. This course will build upon basic techniques learned in the Clinical Management of Neuromuscular Conditions II course and address advanced clinical decision making required by vestibular rehabilitation-trained clinicians. The course will cover pathophysiology, epidemiology, medical and physical therapy management of vestibular and balance disorders that benefit from vestibular rehabilitation. The course will highlight a variety of topics regarding patient history, objective examination, and clinical management for a myriad of vestibular conditions, including vestibular hypofunction, benign paroxysmal positional vertigo, post-concussive syndrome, central disorders, chronic subjective dizziness, and cervicogenic dizziness, among others. An emphasis will be placed on clinical decisions for diagnosis, appropriate referral, and intervention selection. Students will also be exposed to basic diagnostic concepts regarding vestibular function testing. As part of coursework, students will design a peer-reviewed case study and complete a competency examination. All classes will be instructed by a physical therapist with advanced training in vestibular rehabilitation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8154. Elective - Clinical Simulation. 1.5 Credit Hour.**

The goal of this experience is to expose students to "real time" clinically simulated physical therapy situations where they will have to interpret or collect examination data, react to changes in patient status, perform or plan interventions, and document clinical findings and conclusions. The clinical situations will be of increasing complexity with different levels of clinical decision making. The student will be exposed to documentation strategies that match the clinical environment of the simulated case. The topic content will include preparatory paper-based case studies, the utilization of clinical simulation interactions that involve interactions with robotic simulators as well as actual standardized patients, and debriefing sessions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8155. Elective - Pediatrics. 1.5 Credit Hour.**

This elective experience will provide the third-year Doctor of Physical Therapy student with a comprehensive overview of the process of normal and pathological development from prenatal to late adolescence. The World Health Organization's International Classification of Functioning, Disability and Health - Children and Youth version (ICF/CY) will serve as the course's health classification framework. Physical therapy practice across common pediatric conditions and settings will be discussed and compared to adult physical therapy practice. This seminar experience represents a translational learning experience: taking the previously learned clinical science, assessment and interventional strategies from the first two years of the DPT program and directing them toward a specific age-defined cohort of individuals. The student will be expected to demonstrate a complex understanding of how physical therapy assessment and intervention strategies must be adapted to meet the unique needs and settings of the pediatric population. Topic content will be provided in seminar form with a short lecture followed by discussion and group work. Outside experts and experimental learning will also be utilized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8156. Elective - Geriatrics. 1.5 Credit Hour.**

A comprehensive overview of the process of healthy and pathological aging: physiology, cognition, pathology, societal interaction, and functional adaptation. This experience represents a translational learning experience: taking the previously learned clinical science, assessment and interventional strategies from the first two years of the DPT program and integrating them into a case study based learning experience to enhance the delivery of skilled services for the older adult. Emphasis will focus on the student's clinical reasoning for clients ranging from the medically complex older adult to high level healthy aging to promote a clinically excellent approach to patient care with the older adult. The student will be expected to demonstrate a complex understanding of how physical therapy assessment and intervention strategies are best applied towards the older adult with an emphasis on appropriate prescription of exercise.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8160. Special Topics - Integrated Learning Experience. 1 Credit Hour.**

The course serves as a "capstone" in which students continue to develop complex clinical reasoning by using a faculty-designed critical thinking scaffold. Student groups are assigned cases designed to demonstrate systematic clinical decision making. The student groups investigate the assigned cases and respond to the corresponding questions presented with each case scenario. Each group then provides a teaching module on their case (which includes practice of psychomotor skills relevant to the case) to their peers. The course culminates in an integrated learning experience that provides an opportunity for students to self-assess and receive individual feedback on their ability to examine and evaluate a simulated patient in either an inpatient or an outpatient environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 8161. Integrated Clinical Experience 1. 1 Credit Hour.**

The Integrated Clinical Experience (ICE) 1 course is the first in a series of five. This course implements approaches to develop the clinical reasoning scaffold in patient care, while enhancing opportunities for growth of professional behaviors and peer learning. The aim of the ICE course series is to integrate concurrent didactic coursework with experiential learning activities in varying settings. The ICE 1 course emphasizes the development of the patient-therapist interaction surrounding basic clinical skills and aims to present clinical decision making strategies at a linear and beginner level. The course activities take place in simulated patient environments, clinical settings, and in the classroom and aim to foster professional behavior, communication, and patient interaction skills. Guided self-reflection is utilized to illustrate the interactions within the reasoning process, appropriate for students at this beginning level. Students perform self and peer reflection within learning activities related to basic skill development occurring simultaneously in the didactic curriculum. Students will be expected to act in a professional manner and practice skills learned in laboratory sessions of 1st year DPT courses during this experiential learning course. Presented clinical and simulated cases highlight typical attributes of the health condition, body structure/function, activities, and participation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8162. Integrated Clinical Experience 2. 1 Credit Hour.**

The Integrated Clinical Experience (ICE) 2 course is the second in a series of five. This course implements approaches to develop the clinical reasoning scaffold in patient care, while enhancing opportunities for growth of professional behaviors and peer learning. The aim of the ICE course series is to integrate concurrent didactic coursework with experiential learning activities in varying settings. The ICE 2 course emphasizes the development of the patient-therapist interaction surrounding basic clinical skills and aims to present clinical decision making strategies at a linear and beginner level. The course activities take place in simulated patient environments, clinical settings, and in the classroom and aim to foster professional behavior, communication, and patient interaction skills. Guided self-reflection is utilized to illustrate the interactions within the reasoning process, appropriate for students at this beginning level. Students perform self and peer reflection within learning activities related to basic skill development occurring simultaneously in the didactic curriculum, as well as skills learned across semesters in the 1st year. Students will be expected to act in a professional manner and practice skills learned in laboratory sessions of 1st year DPT courses during this experiential learning course. Presented clinical and simulated cases highlight typical attributes of the health condition, body structure/function, activities, and participation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8163. Integrated Clinical Experience 3. 1 Credit Hour.**

The Integrated Clinical Experience (ICE) 3 course is the third in a series of five. This course implements approaches to develop the clinical reasoning scaffold in patient care, while enhancing opportunities for growth of professional behaviors and peer learning. The aim of the ICE course series is to integrate concurrent didactic coursework with experiential learning activities in varying settings. The ICE 3 course further develops patient-therapist interaction surrounding basic clinical skills and aims to present clinical decision making strategies at a linear and beginner level. The course activities take place in simulated patient environments, clinical settings, and in the classroom and aim to foster professional behavior, communication, and patient interaction skills. Guided self-reflection is utilized to illustrate the interactions within the reasoning process, appropriate for students at this beginning level. Students perform self and peer reflection within learning activities related to basic skill development occurring simultaneously in the didactic curriculum, as well as skills learned across the entire 1st year didactic curriculum. Presented clinical and simulated cases highlight typical attributes of the health condition, body structure/function, activities, and participation. Students will synthesize examination and evaluation findings to expand upon the linear clinical decision-making process. This synthesis facilitates the development of an appropriate physical therapy prognosis and plan of care with a focus on the ICF model.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.



**PHTH 8164. Integrated Clinical Experience 4. 1 Credit Hour.**

The Integrated Clinical Experience (ICE) 4 course is the fourth in a series of five. This course implements approaches to develop the clinical reasoning scaffold in patient care, while enhancing opportunities for growth of professional behaviors and peer learning. The aim of the ICE course series is to integrate concurrent didactic coursework with experiential learning activities in varying settings. The ICE 4 course emphasizes the integration of the ICF model and its complex interactions and aims to foster more comprehensive and multi-faceted clinical decision-making strategies. ICE 4 expands upon the foundations established during the first year based upon the concurrent body systems course work. The course activities take place in simulated patient environments, clinical settings, and in the classroom and aim to foster professional behavior, communication, and patient interaction skills. The ICE 4 course helps to further develop the framework of clinical reasoning processes and strategies, integrating material between the courses in the Fall semester of the 2nd didactic year, and between the first and second academic years. Additional complexity is incorporated into clinical scenarios and patient/client interactions that involve patient-related environmental factors such as motivation, family support, beliefs and expectations. It is the expectation that students begin to develop more complex and nonlinear clinical reasoning skills in the ICE 4 course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8165. Integrated Clinical Experience 5. 1 Credit Hour.**

The Integrated Clinical Experience (ICE) 5 course is the fifth in a series of five. This course implements approaches to develop the clinical reasoning scaffold in patient care, while enhancing opportunities for growth of professional behaviors and peer learning. The aim of the ICE course series is to integrate concurrent didactic coursework with experiential learning activities in varying settings. The ICE 5 course emphasizes the integration of the ICF model and its complex interactions and aims to foster more comprehensive and multi-faceted clinical decision-making strategies. ICE 5 expands upon the foundations established during the first year based upon the concurrent body systems course work. The course activities take place in simulated patient environments, clinical settings, and in the classroom and aim to foster professional behavior, communication, and patient interaction skills. The ICE 5 course helps to further develop the framework of clinical reasoning processes and strategies, integrating material between courses in the Spring semester of the 2nd didactic year, across semesters in the 2nd didactic year, and between the first and second academic years. Additional complexity is incorporated into clinical scenarios and patient/client interactions that involve patient-related environmental factors such as motivation, family support, beliefs and expectations. At the end of the ICE 5 course, students should demonstrate readiness to enter the full-time clinical education curriculum.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8531. Pro Bono Clinical Practice. 0 Credit Hours.**

This elective course provides students actively enrolled in a health/health care program with opportunities to practice and learn new clinical skills from licensed community-based practitioners in their respective fields who will serve as their clinical mentors. Students have the opportunity to apply knowledge and skills that they are currently learning in a real practice setting. The clinical services are delivered in the College of Public Health's North Broad Physical Therapy Center which is a pro bono clinic providing health and health care services to individuals who are uninsured, under-insured, or do not have the financial means to make their copays. The Center emphasizes the importance of inter-professional education and collaboration for students in the College of Public Health and the Schools of Medicine and Pharmacy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Medicine, Lewis Katz School, Pharmacy, Social Work.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 8581. Mslsklt Mgt I Residency. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 8582. Mslsklt Mgt II Residency. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9085. Mentorship I Residency. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9086. Mentorship II Residency. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9185. Clinical Experience 1. 8 Credit Hours.**

This course is designed as a full-time clinical internship. The clinical experience takes place at an off campus clinical site with coordination by the Director of Clinical Education. The students will have the opportunity to problem solve and utilize their clinical decision making skills in examining, evaluating, assessing and developing plans of care for varied patient populations as per the objectives of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9285. Clinical Experience 2. 4 Credit Hours.**

This course is designed as a full-time clinical internship for each student and takes place over the course of 12 weeks. This course requires placement at an off-campus clinical site with coordination from the Director of Clinical Education. The students will have the opportunity to problem solve and utilize their clinical decision making skills in examining, evaluating, assessing and developing plans of care for varied patient populations as per the objectives of the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may be repeated for a total of 8 credit.

**PHTH 9385. Clinical Experience 3. 8 Credit Hours.**

Clinical Experience 3 is the third and final full-time clinical experience occurring after all didactic content has been delivered. The Clinical Experience 3 is twelve weeks in length. The affiliation typically takes place off site and is coordinated, managed, and overseen by the Director of Clinical Education. The students will have the opportunity to problem solve and utilize their clinical decision making skills in examining, evaluating, assessing and developing plans of care for varied patient populations as per the objectives of the course. Students will be supervised in an affiliating clinical facility by a licensed physical therapist, using an experiential teaching format. Students will have the opportunity to work and learn in a physical therapy setting, and have the opportunity to integrate classroom didactic information with practical hands-on clinical experience. The student will have exposure to patient care, have the opportunity for clinical learning and teaching, administration, observation and/or participation in research, and practice and adopt professional socialization skills. Instructional methods will include online asynchronous Canvas assignments and onsite clinical practical experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Physical Therapy.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9620. Human Movement Science I: Neural Factors. 3 Credit Hours.**

Current theories and research pertaining to the neural mechanisms of motor control and sensorimotor integration are introduced as a foundation for the evaluation and treatment of movement and balance deficits. Studies involving lesions of the nervous system are discussed to demonstrate the impact of neural impairments on motor performance and motor learning. The course also introduces the neurophysiologic methods to evaluate the relationship between neural circuitry and human movement (e.g., MRI, EEG, single unit recording, and PET).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9621. Human Movement Science III: Cognition and Learning. 3 Credit Hours.**

A survey of theory and research concerning the cognitive processes of the human brain and motor behavior is conducted. Emphasis is on the developmental changes that underlie cognition as they relate to motor behavior. These objectives are approached by examining lifespan motor development and learning, attentional mechanisms, perceptual effects on motor output, implicit and procedural memory effects on motor control, automatic compensatory responses and/or strategies following injury or disease, and adaptation to long- and short-term changes in the body or environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9622. Instrumentation and Motion Analysis. 3 Credit Hours.**

Current methodology appropriate to the study of normal and abnormal human movement is presented. Both technical and theoretical foundations of instrumentation use are included. Students have opportunities to develop skills in data acquisition, reduction, and analyses in the laboratory sessions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9623. Atypical Human Movement. 3 Credit Hours.**

An exploration of the theoretical perspectives used to interpret movement dysfunctions. Topics include overuse, developmental regression, limited repertoires, and external and internal constraints. Required for Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** PHTH 9620.

**PHTH 9624. Human Movement Science II: Mechanics and Models. 3 Credit Hours.**

Application of the mechanical principles to static and dynamic models of human posture and movement and of the mechanical properties of the link-segment systems and biological tissues are introduced in this course. Dynamical systems framework are introduced as a basis for understanding the organization of complex movement patterns. Other systems, computational, and statistical models that are commonly used to analyze and describe the mechanisms of human posture and movement are discussed. Interpretation of the model predictions is based on healthy individuals in addition to those with movement deficits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9625. Clinical Decision Making. 3 Credit Hours.**

A survey of theory and research concerning the cognitive processes of the human brain and motor behavior is conducted. Emphasis is placed on the developmental changes that underlie cognition as they relate to motor behavior. These objectives are approached by examining lifespan motor development and learning, attentional mechanisms, perceptual effects on motor output, implicit and procedural memory effects on motor control, automatic compensatory responses and/or strategies following injury or disease, and adaptation to long- and short-term changes in the body or environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9626. Musculoskeletal Impairment: Evidence for Examination and Intervention Strategies. 3 Credit Hours.**

Review of evidence from refereed literature and from expert clinical practice that supports reliability, validity, and utility of examination and intervention techniques used in the physical therapy management of patients with musculoskeletal impairment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9627. Movement Sci & Cognitive. 3 Credit Hours.**

Current theories pertaining to the control of movement and posture are reviewed as a foundation for the evaluation and treatment of movement and balance dysfunction. Required for Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9645. Advanced Musculoskeletal Anatomy. 3 Credit Hours.**

Advanced cadaver dissection and study. Students must have a basic understanding of human anatomy and cadaver dissection. The course integrates clinical and anatomical perspective of the human body. Individual projects are planned by each student.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9651. Theoretical Foundations of Physical Therapy. 3 Credit Hours.**

This course examines theories that underlie the discipline of Physical Therapy. Topics include neuronal regeneration, balance control, motor development, cumulative trauma disorders, health services research and expertise in clinical practice. Students examine empirical evidence that supports or refutes each theory. Required for Ph.D. in PT students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** PHTH 9620.

**PHTH 9653. Research Strategies. 3 Credit Hours.**

Research in health care practice and education. Includes critical analysis of manuscripts, experimental and nonexperimental research designs, and overview of quantitative and qualitative analyses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9654. Laboratory Rotations and Seminar in Human Movement Science. 3 Credit Hours.**

Full-time work in the laboratory of a faculty member to learn instrumentation and techniques pertinent to the area of research the student wishes to pursue. Two rotations are required for Ph.D. in PT students. Health care problems are also presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9655. Qualitative Research Strategies for Health Care. 3 Credit Hours.**

Qualitative research focusing on grounded theory and case analysis is the subject of this course. Combining qualitative and quantitative research strategies to study health care problems is also presented.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9673. Curricular Design and Teaching in the Health Professions. 3 Credit Hours.**

This course covers philosophical orientations to and alternative curricular designs for professional health care academic and clinical education, as well as theories of learning, teaching strategies, and evaluation formats. Required for Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9682. Independent Study. 1 to 3 Credit Hour.**

This course offers individual investigation in physical therapy practice or research under the guidance of a mentor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9774. Administration of Health Professions Academic Programs. 3 Credit Hours.**

This course examines the organization of universities with an emphasis on administration of professional graduate programs, program and faculty evaluation and development, funding, admissions, professional accreditation, clinical education, and state licensure. Required for Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHTH 9787. Teaching Practicum. 1 to 3 Credit Hour.**

Practicum in teaching in the professional physical therapy curriculum. Students contract with a faculty member for guided development, presentation and evaluation of a course segment based on principles and concepts covered in PHTH 9673.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is limited to Ph.D. students who have completed all their coursework and are finishing qualifying examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9998. Dissertation Proposal. 1 to 3 Credit Hour.**

Students are expected to prepare and submit a dissertation proposal in the form of a grant proposal and successfully defend it orally before their Dissertation Committee. As appropriate, they must obtain IRB approval for their proposed research, and submit a copy of the grant proposal to the Graduate School. Students are expected to have developed and defended their dissertation grant proposal within one year of successfully completing their preliminary examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHTH 9999. Dissertation Research and Colloquium. 1 to 4 Credit Hour.**

This course is limited to Ph.D. students who have passed preliminary examinations. Continuous registration in the Fall and Spring semesters is required until the oral defense has been passed. Students are required to attend a colloquium held once a month to review and discuss progress to date.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Physician Assistant (PA)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PA 8101. Physician Assistant Practice I. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar. Physician Assistant Practice I is the first of a four-course series that explores the social, regulatory, ethical and professional aspects of becoming a physician assistant. This first course will review the societal aspects of the profession that include the history of the physician assistant profession, how PAs fit into the U.S. healthcare system, professionalism, the PA-physician supervisor relationship and PA scope of practice. Students will be introduced to the concepts of effective communication skills with patients and other healthcare providers. Students will also learn about patient motivators to incorporate healthy behaviors and how various stakeholders to good health influence patients and healthcare providers in health promotion and disease prevention.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8102. Patient Assessment I. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar. Patient Assessment I is the first of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will learn interview and examination techniques along with appropriate counseling and patient education skills. This course consists of an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in fundamental clinical skills that include: taking a patient history, performing a physical examination of a normal adult, and basic case presentation. Professionalism and the student's emerging role as a healthcare provider are addressed throughout the course. Activities are integrated with the science curriculum whenever possible.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8103. Human Gross Anatomy. 5 Credit Hours.**

This is a Physician Assistant five credit course with focus on the study of functional and applied human anatomy. Each topic will utilize lecture and lab experiences, which include human cadaver specimens. When appropriate, clinical and surgical correlations are made from a diagnostic as well as an operative point of view. Instruction is primarily in lecture and laboratory format. Textbooks, atlases, computer software programs, and other visual aids are available for study. Applied learning based on clinically relevant cases will be emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8104. Introduction to Scientific Inquiry. 1 Credit Hour.**

This is a Physician Assistant one-credit course offered during Summer Session I. This course is the first course in the preparation of the student for the capstone project that will cumulate at the end of their clerkship year through the Scholarly Clinical Research Courses I and II. It will focus on introducing students to hypothesis directed research approaches that leads to new findings that ultimately impact on the care of patients. Library staff will provide instruction on the use of the library resources available to support research. In addition, students will be introduced to the reading, presentation, interpretation and critique of published manuscripts dealing with current important issues in clinical medicine. Each topic will utilize lecture and class discussion. Students will also be expected to make class presentations of clinically relevant manuscripts. The Introduction to Scientific Inquiry course will be coordinated with the Introduction to Epidemiology and Biostatistics course, which will be running simultaneously.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8105. Foundations of Medical Sciences I. 4 Credit Hours.**

This is a Physician Assistant four-credit course offered during Summer Session I. It will focus on reviewing and extending basic fundamental knowledge in medical sciences in the areas of biochemistry, nutrition, molecular biology, genetics, and cell and organ physiology. Mastery of this information is necessary to progress to the organ systems clinical medicine fundamentals courses, which will follow, in subsequent semesters. Each topic will utilize lecture, problem solving, and workshop experiences followed by an examination. Textbooks, PowerPoint presentations prepared by faculty, problem sets prepared by faculty and other visual aids are available for study. Applied learning based on clinically relevant cases will be emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8106. Introduction to Epidemiology and Biostatistics. 2 Credit Hours.**

This is a Physician Assistant two-credit course offered during Summer Session I. It will focus on providing an introduction to epidemiology and biostatistics. Concepts will be presented in lecture and reinforced with homework problem sets and workshops. Homework problems and workshops will be designed around clinically important research topics. Topics include measures of disease frequency, probability, overview of the epidemiologic study designs, sample size, hypothesis testing, tests of significance (p-values, confidence intervals, chi-square tests), measures of data quality and bias, multivariate models, survival analysis, and causality. Emphasis will be placed on students being able to apply information taught to the interpretation and critique of clinically relevant research manuscripts.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8201. Physician Assistant Practice II. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. The Physician Assistant Practice (II) course is the second of a four-course series that explores the social, regulatory, ethical and professional aspects of a physician assistant. This second course will focus on regulatory issues that impact the practice of the physician assistant including the political process, drivers of public health, health policy development, health care financial systems and the contributions of the physician assistant regarding these issues.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8202. Patient Assessment II. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar. Patient Assessment II is the second of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will continue to learn interview and examination techniques along with appropriate counseling and patient education skills. Patient Assessment II is designed to build upon the skills acquired in Patient Assessment I. Patient Assessment II is taught throughout the first fall semester of the PA program. This course consists of an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in fundamental clinical skills that include: taking a patient's focused medical history, performing a focused physical examination, and case presentation. The focused history taking and physician exam will include the normal neurological and mental status examination, the cardiology, pulmonary and hematology focused examinations. Professionalism and the student's emerging role as a healthcare provider are addressed throughout the course. Activities are integrated with the science curriculum whenever possible.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8203. Foundations of Medical Sciences II. 4 Credit Hours.**

This is a Physician Assistant four-credit course offered during Fall Session I. It will focus on reviewing and extending basic fundamental knowledge in medical sciences in the areas of immunology, microbiology, and pharmacology. Mastery of this information is necessary to progress to the organ systems clinical medicine fundamentals courses, which will follow later in this semester and subsequent semesters. Each area of study will utilize lecture, problem solving, and workshop experiences followed by an examination. Textbooks, PowerPoint presentations prepared by faculty, problem sets prepared by faculty and other visual aids are available for study. Applied learning based on clinically relevant cases will be emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8204. Fundamentals of Hematology. 3 Credit Hours.**

This is a Physician Assistant, three-credit course. Fundamentals of Hematology is a course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of hematological diseases. It is one of the integrated system blocks that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and Cardiology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of hematological basic science principals, focused physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of hematological disease, the initial therapeutic approach to a variety of hematological diseases and the communication skills necessary for providing patient education on hematological diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8205. Fundamentals of Cardiology. 4 Credit Hours.**

This Physician Assistant four-credit course, Fundamentals of Cardiology is a fall semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of cardiovascular diseases. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of cardiovascular basic science principles, focused cardiovascular physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of cardiovascular disease, the initial therapeutic approach to a variety of cardiovascular diseases and the communication skills necessary for providing patient education on cardiovascular diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8206. Fundamentals of Pulmonology. 4 Credit Hours.**

This Physician Assistant four-credit course, Fundamentals of Pulmonology, is a fall semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of pulmonary diseases. It is the second of the integrated system courses that is taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine, Surgery and Radiology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of the pulmonary system's basic science principles, focused pulmonary physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of respiratory disease, the initial therapeutic approach to a variety of respiratory diseases and the communication skills necessary for providing patient education on pulmonary/respiratory diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8207. Fundamentals of Gastroenterology. 3 Credit Hours.**

This Physician Assistant three-credit course, Fundamentals of Gastroenterology, is a course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of Gastroenterology diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Department of Medicine/Gastroenterology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Gastroenterology basic science principles, focused Gastroenterology physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of Gastroenterology disease, the therapeutic approach to a variety of Gastroenterology diseases and the communication skills necessary for providing patient education on Gastroenterology diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8301. Physician Assistant Practice III. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. The Physician Assistant Practice (III) is the third of a four-course series that explores the social, regulatory, ethical and professional aspects of physician assistant practice. This third course will focus on the ethical aspects of the profession that serve to enhance care and to protect patients and healthcare workers.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8302. Patient Assessment III. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. Patient Assessment III is the third of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will continue to learn interview and examination techniques along with appropriate counseling and patient education skills. Patient Assessment is designed to build upon the skills acquired in Patient Assessment I and II. This course consists of an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in fundamental clinical skills that include: taking a patient's focused medical history, performing a focused physical examination, and case presentation. The medical history taking and physician exam will focus on the skin exam, EENT, abdominal, musculoskeletal and neurological examinations and the findings associated with diseases and disorders of these corresponding systems. Professionalism and the student's emerging role as a healthcare provider are addressed throughout the course. Activities are integrated with the science curriculum whenever possible.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.



**PA 8303. Fundamentals of Nephrology. 2 Credit Hours.**

This Physician Assistant two-credit course, Fundamentals of Nephrology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of renal diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Medicine/Nephrology. By the end of the Fundamentals of Nephrology course, the physician assistant student will: Evaluate Nephrology diseases that are commonly found in primary care medicine in relation to the etiology, epidemiology and pathophysiology for patients presenting with Nephrology diseases and disorders; Recognize the signs and symptoms commonly linked with specific Nephrology diseases and formulate a comprehensive differential diagnosis; Select the appropriate diagnostic testing and procedures used in the evaluation and management of Nephrology disease; Classify the diagnostic test and procedure results as they relate to disease of the Nephrology system; Choose the most appropriate pharmacologic and non-pharmacologic treatment and management options for the Nephrology disorders studied; Assess a clinical situation as a basis for referral to a Nephrology specialist; Decide on the necessary examination and procedures required for the diagnosis and management of kidney disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8304. Fundamentals of Endocrinology. 3 Credit Hours.**

This is a Physician Assistant three-credit course. Fundamentals of Endocrinology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of Endocrinologic diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Medicine/Division of Endocrinology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Endocrinology basic science principles, focused physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of Endocrinology disease, the therapeutic approach to a variety of Endocrinology disorders and the communication skills necessary for providing patient education on Endocrinology diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8305. Fundamentals of Ears/Eyes/Nose/Throat (EENT). 2 Credit Hours.**

This is a Physician Assistant two-credit course. Fundamentals of Ears/Eyes/Nose/Throat (EENT) is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of EENT diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine/Ophthalmology and otolaryngology.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8306. Fundamentals of Neurology. 2 Credit Hours.**

This Physician Assistant two-credit course, Fundamentals of Neurology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of neurological diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and the Department of Neurology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Neurological basic science principles, focused Neurological physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of Neurological disease, the therapeutic approach to a variety of Neurological diseases and the communication skills necessary for providing patient education on Neurological diseases and disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8307. Fundamentals of Rheumatology and Orthopedics. 3 Credit Hours.**

This is a Physician Assistant, three-credit course. Fundamentals of Rheumatology and Orthopedics is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of renal diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Medicine/Rheumatology and the Department of Orthopedic Surgery. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Rheumatology and Orthopedics basic science principles, focused Rheumatology and Orthopedics physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of musculoskeletal disease, the therapeutic approach to a variety of Rheumatology and Orthopedics diseases and the communication skills necessary for providing patient education on musculoskeletal diseases and disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8308. Fundamentals of Dermatology. 2 Credit Hours.**

This is a Physician Assistant, two-credit course. Fundamentals of Dermatology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of dermatological diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and Dermatology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of dermatological basic science principles, focused dermatological physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of dermatological disease, the therapeutic approach to a variety of dermatological disorders and the communication skills necessary for providing patient education on dermatological diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8309. Essentials of Psychiatry. 2 Credit Hours.**

This is a Physician Assistant two-credit lecture/seminar. Essentials of Psychiatry is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of psychiatric diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and the Department of Psychiatry. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of psychiatric basic science principles, focused psychiatric physical examination techniques (in conjunction with Patient Assessment IV), the initial use of diagnostic tests in the evaluation of psychiatric disease, the therapeutic approach to a variety of psychiatric diseases and the communication skills necessary for providing patient education on psychiatric diseases and disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8401. Physician Assistant Practice IV. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. The Physician Assistant Practice (IV) course is the last of a four-course series that explores the social, regulatory, ethical and professional aspects of physician assistant practice. This fourth course will focus on the topics pertinent to employment and practice of a physician assistant including licensing and credentialing, medical coding bills, avoiding malpractice, healthcare financing and delivery systems along with career and leadership opportunities. Students will continue to work on their professional portfolios.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8402. Patient Assessment IV. 1 Credit Hour.**

Patient Assessment IV is the last course of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will continue to learn interview and examination techniques along with appropriate counseling and patient education skills. Patient Assessment is designed to build upon the skills acquired in Patient Assessment I - III. Overviews of clinical skills and patient management principles are presented in lectures, and rehearsed in small-group, hands-on settings in the Clinical Simulation Center. Simulated patients, physician assistant faculty, and high-fidelity patient mannequins are used throughout the course. Students participate in formative Practice Clinical Encounters, after which they review and critique their performance with their program faculty instructor.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8403. Bioethics. 2 Credit Hours.**

This is a Physician Assistant two-credit lecture/seminar. Bioethics is a Summer II semester course and consists of lecture and small group work. The course will focus on practical principles related to medical ethics and professionalism which includes topics related to professional conduct, cultural awareness and ethical problem solving using clinical scenarios. The overarching goal of this course is to provide students with the competences to interact professionally and ethically with patients, families and other health care providers, as well as to prepare them to engage in bioethics policy related discussions and decisions, whether at the level of the individual clinic, hospital, city, state, or federal government.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8404. Essentials of Reproductive Health. 4 Credit Hours.**

This is a Physician Assistant four-credit lecture/seminar. This Essentials of Reproductive Health course is a Summer II semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of diseases affecting the genital/urinary system. It is one of the integrated system courses that are taught by basic-science faculty from the Department of Biomedical Education and Data Science as well as physician assistants and physician faculty from the Departments of Internal Medicine, Obstetrics and Gynecology, Urology and Surgery. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of basic science principles, focused physical examination techniques (in conjunction with Patient Assessment IV), the initial use of diagnostic tests in the evaluation of disease effecting the genitourinary system, the initial therapeutic approach to a variety of diseases and the communication skills necessary for providing patient education on these diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8405. Essentials Across the Lifespan. 4 Credit Hours.**

This is a Physician Assistant four-credit lecture/seminar. This four-credit course, Essentials Across the Lifespan is a summer II semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of common diseases and conditions affecting infants, children, adolescents and older adults. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Pediatrics and Internal Medicine. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of basic science principles, focused physical examination techniques (in conjunction with Patient Assessment IV), the initial use of diagnostic tests, the initial therapeutic approach and the communication skills necessary for providing patient education of common outpatient diseases and conditions.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8406. Essentials of Surgery and Emergency Medicine. 4 Credit Hours.**

This is a Physician Assistant four-credit lecture/seminar. Essentials of Surgery and Emergency Medicine is a summer II semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of surgical/emergent disease and disorders. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Surgery and Emergency Medicine. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Surgical and Emergency Medicine basic science principles, with focus on the Surgical and Emergency evaluation and treatment modalities. Physical examination techniques (in conjunction with Patient Assessment IV), the use of diagnostic tests in the evaluation of Surgical and Emergency disorders, the therapeutic approach to the spectrum of these disorders and the communication skills necessary for providing patient education will be given.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9085. Family Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Family Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9086. Elective Clerkship in Medicine Subspecialties I. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the practice of a Medicine Subspecialty chosen by the student. These may include one of the following: Cardiology, Endocrinology, Gastroenterology, Hepatology, Hematology/Oncology, Hospital Medicine, Infectious Disease, Nephrology or Rheumatology. Students may participate in the management of patients in both the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9087. Elective Clerkship in Urology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Urology. Students may participate in the management of the surgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9182. Independent Study. 1 to 6 Credit Hour.**

This is a Physician Assistant, variable credit Independent Study (1-6 credits) course. This course is designed to provide the student with an opportunity to gain or enhance knowledge and to explore an area of interest related to physician assistant research or the delivery and/or administration of health services.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may be repeated for additional credit.

**PA 9185. Internal Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Internal Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9186. Elective Clerkship in Neurology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the practice of Neurology. Students may participate in the management of Neurological patients both in the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9187. Elective Clerkship in Medicine Subspecialties II. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the practice of a Medicine Subspecialty chosen by the student. These may include one of the following: Cardiology, Endocrinology, Gastroenterology, Hepatology, Hematology/Oncology, Hospital Medicine, Infectious Disease, Nephrology or Rheumatology. Students may participate in the management of patients in both the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8406, and PA 9991.

**PA 9285. Emergency Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Emergency Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9286. Elective Clerkship in Neurosurgery. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Neurosurgery. Students may participate in the management of the neurosurgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9287. Elective Clerkship in Surgical Subspecialties II. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the Surgical Subspecialty chosen by the student. These may include one of the following: Abdominal Organ Transplant, Cardiovascular Surgery, Colorectal Surgery, Minimally Invasive Surgery, Plastic and Reconstructive Surgery, Surgical Oncology, Trauma Surgery and Critical Care, or Vascular and Endovascular Surgery. Students may participate in the management of the surgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9385. Obstetrics/Gynecology Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in obstetrics and gynecology. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9386. Elective Clerkship in Ophthalmology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Ophthalmology. Students may participate in the management of the ophthalmological patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9485. Surgery Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluating and managing common problems encountered in surgery. Students will participate in management of surgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9486. Elective Clerkship in Orthopaedic Surgery and Sports Medicine. 5 Credit Hours.**

This is a 5-week elective clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Orthopaedic Surgery and Sports Medicine. This rotation can be customized to the student's interests. Time can be spent on the different Orthopaedic Services including Trauma, Joints, Sports, Spine, and Hand Surgery. Competency in evaluating and managing patients with the following conditions will be expected: trauma, degenerative and inflammatory arthritis, sports injuries, spine deformity and degenerative conditions, hand injuries and arthritis conditions, musculoskeletal infections, and metastatic musculoskeletal disease. The student will accompany a staff member and residents in outpatient orthopaedic clinics. The student will assist in the operating room and hospital rounds. Emergency care of the injured patient will also be emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9585. Behavioral Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Behavioral Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9586. Elective Clerkship in Otolaryngology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Otolaryngology. Students may participate in the management of the otolaryngology patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9685. Pediatric Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in pediatrics. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9686. Elective Clerkship in Physical Medicine and Rehabilitation. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the practice of Physical Medicine and Rehabilitation. Students may participate in the management of Physical Medicine and Rehabilitation patients both in the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9785. Elective Clerkship I. 5 Credit Hours.**

This is one of two 5-week clinical elective courses designed to provide the physician assistant with exposure to likely areas of medical practice of interest to the student. Potential areas include but are not limited to the following: Cardiology, Pulmonology, Orthopedic Surgery, Trauma Surgery, Gastroenterology. The physician assistant student will be provided experience in evaluating and treating common problems encountered in the area of their chosen elective.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9786. Elective Clerkship in Radiology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common procedures encountered in the practice of Radiology. Students may be involved in the obtaining and interpreting of medical images obtained with x-rays, radioactive substances, magnetism or ultrasound in both the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9885. Elective Clerkship II. 5 Credit Hours.**

This is one of two 5-week clinical elective courses designed to provide the physician assistant with exposure to likely areas of medical practice of interest to the student. Potential areas include but are not limited to the following: Cardiology, Pulmonology, Orthopedic Surgery, Trauma Surgery, Gastroenterology. The physician assistant student will be provided experience in evaluating and treating common problems encountered in the area of their chosen elective.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9886. Elective Clerkship in Surgical Subspecialties I. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the Surgical Subspecialty chosen by the student. These may include one of the following: Abdominal Organ Transplant, Cardiovascular Surgery, Colorectal Surgery, Minimally Invasive Surgery, Plastic and Reconstructive Surgery, Surgical Oncology, Trauma Surgery and Critical Care, or Vascular and Endovascular Surgery. Students may participate in the management of the surgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9985. Elective Clerkship in Dermatology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Dermatology. Students may also participate in the management of the dermatologic patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.

**PA 9986. Elective Clerkship in Thoracic Medicine and Surgery. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Thoracic Medicine and Surgery. Students may participate in the management of the thoracic medicine and surgery patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management in both the in-patient and out-patient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PA 8401, PA 8402, PA 8403, PA 8404, PA 8405, PA 8406, and PA 9991.



**PA 9991. Scholarly Clinical Research I. 1 Credit Hour.**

This is a Physician Assistant one-credit course. Scholarly Clinical Research I is a summer II semester course and is the first of a two-part series. In the first part of the series, students will plan and develop the goals and background information for their capstone clinical research project that will culminate in the second part during the summer III semester. This course builds upon the concepts presented in the first semester's Introduction to Scientific Inquiry (PA 8104) course. Students will be expected based on their experiences in the first three semesters in the program to select a topic and a graduate faculty mentor for their capstone clinical research project at the beginning of the semester. Topics must be in 1 of 4 potential general areas: Basic Research, Community-Based Research, Evidence-Based Medicine Research or Translational Research. The topic of the project and the mentor must be approved by the course director. Working with the Program approved graduate faculty mentor, the students will develop the specific objective(s)/hypothesis of their project and research the background literature pertinent to the project. At the end of the semester, the students will submit a research paper providing this information in a publishable form. The student will be expected to continue the development and production of this proposal throughout the Fall II, Spring II and Summer III semesters.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9993. Comprehensive Review. 2 Credit Hours.**

This two-credit review course employs lectures, small-group discussions, self-assessments, and a comprehensive written examination to measure clinical learning in preparation for graduation from the physician assistant program. In addition, this course will prepare students to challenge the National Commission on the Certification of Physician Assistants (NCCPA) Physician Assistant National Certifying Examination (PANCE) that all must pass to function as a physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may be repeated for additional credit.

**PA 9995. Scholarly Clinical Research II. 1 Credit Hour.**

This one-credit course, Scholarly Clinical Research II, will be taken in the third summer of the PA Program and is the second of a two-part series focusing on scholarly research. This interactive course will build upon the concepts presented in the first semester's Introduction to Scientific Inquiry (PA 8104) and Scholarly Clinical Research I (PA 9991) courses. Working with their Program-approved graduate faculty mentor, the student will complete their capstone research during fall II, spring II, and summer III. At the conclusion of the course, the student will be required to complete the paper begun as part of Scholarly Clinical Research I by describing the results of their project and discussing them in the context of the available published literature. In addition, the students will prepare a poster for presentation of their capstone project at the specified PA Research Day.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in PA 8104 and PA 9991.

## Physics (PHYS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PHYS 5000. Topical Seminar. 3 Credit Hours.**

This course considers special topics in Physics, not considered in our other courses. The level of this course is graduate, but the content could be accessible to upper-level undergraduate Physics majors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 5001. Introduction to Quantum Computing. 3 Credit Hours.**

This course will give an elementary introduction to some basics of quantum information and quantum computing that are accessible to not only physicists but also people with a variety of backgrounds. It will introduce the students to the latest scientific and technological advancement, and prepare for further study and/or initiating research if one wishes to pursue in this field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 5002. Physics Research and Ethics. 1 Credit Hour.**

This course will introduce new graduate students to the diverse faculty research programs in physics at Temple, and help them to make an informed choice of research advisor and topic. It will also make sure that all students are aware of the ethical code for physicists. The course will meet for one hour per week. In the first 3 to 5 weeks, the instructor will lecture on the ethical and etiquette responsibilities of students, teachers, and researchers in physics. In each of the next 10 to 12 weeks, a faculty volunteer will explain his or her research program and opportunities for student participation in it. A faculty member may also nominate a graduate student to speak to the class. Former graduate students who hold physics research positions could also be invited to speak. Students will have ample opportunity to ask questions. They will be required to turn in one-page summaries of the lectures for grading by the lecturers; this should measure the students' understanding and improve their writing skills. A possible text for the ethics lectures would be the National Academy of Sciences booklet "On Being a Scientist".

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 5101. Analytical Mechanics. 3 Credit Hours.**

Variational principles, Lagrange's and Hamilton's equations; canonical transformations; small oscillations; dynamics of particles, rigid bodies, strings and membranes; hydrodynamics; chaos in deterministic systems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 5301. Electromagnetic Theory. 3 Credit Hours.**

Boundary value problems of the electrostatic and magnetostatic fields; Maxwell's equations; plane waves at boundaries in dielectric and conducting media; potentials in the Lorentz gauge; Green's functions for wave and Helmholtz equations; multipole radiation; material dispersion; diffraction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 5302. Advanced Electromagnetic Theory. 3 Credit Hours.**

Maxwell stress tensor; relativistic dynamics; Lagrangian formulation of electrodynamics; Noether's theorem; laser resonant cavities and optics of Gaussian beams; Eikonal and geometrical optics limit; synchrotron radiation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 5301.

**PHYS 5501. Mathematical Physics. 3 Credit Hours.**

Tensor analysis; group theory; complex variable theory; partial differential equations; Sturm-Liouville systems; integral transforms; integral equations and Green's function methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 5502. Computational and Mathematical Physics. 3 Credit Hours.**

Preliminaries; numerical applicability, survey of algorithms, computer modeling, programming considerations; basic numerical methods; numerical linear algebra; numerical solution to ordinary and partial differential equations; molecular dynamics; Monte Carlo simulations; nonlinear methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 5501.

**PHYS 5701. Quantum Mechanics I. 3 Credit Hours.**

Fundamental principles of quantum mechanics; relation to classical mechanics; Schrodinger and operator formulations; path integrals; Aharonov-Bohm effect; examples of exact solutions; central forces and angular momentum; scattering theory; Bell's theorem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 5702. Quantum Mechanics II. 3 Credit Hours.**

Matrix mechanics; theory of electron spin; Hilbert space formulation of quantum mechanics; transformation theory; theory of rotations; spin and statistics; stationary approximation methods with application to atomic systems; time-dependent perturbation theory; exponential decay.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 5701.

**PHYS 8001. Practicum Teaching of Physics. 1 Credit Hour.**

Required of all graduate teaching assistants in their first semester. Consists of supervised instruction in undergraduate laboratories and a weekly two-hour class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 8004. Problems in Experimental Physics. 1 to 6 Credit Hour.**

Special problems in the field of experimental physics. The course is designed to acquaint the student with the research techniques employed in experimental physics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 8005. Problems in Theoretical Physics. 1 to 6 Credit Hour.**

Special problems in the field of theoretical physics. The course is designed to acquaint the student with the research techniques employed in theoretical physics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 8020. Topical Seminar I. 3 Credit Hours.**

This course considers special topics in Physics, not considered in depth in our other courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 8030. Topical Seminar II. 3 Credit Hours.**

This course considers special topics in Physics, not considered in depth in our other courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 8050. Physics Seminar. 0 Credit Hours.**

This course provides the graduate students with the state of the field knowledge about Physics. Students attend 10 to 12 Colloquium/Seminars per semester given by the experts, mostly drawn from national and international authorities in the field. The students are graded on the basis of their attendance in these seminars, and are encouraged to discuss their research with these visiting experts. Last year's colloquium included among other experts, a Nobel Laureate, Sir Anthony Leggett, 2003.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 8102. Statistical Mechanics. 3 Credit Hours.**

Review of thermodynamics; kinetic theory; statistical definition of entropy; microcanonical, canonical, and grand canonical ensembles; applications to gases, diatomic molecules, magnetic systems, phase transitions; quantum statistics; ideal boson and fermion systems; Bose-Einstein condensation; black body radiation; models of solids; properties of liquid helium.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (PHYS 5501 and PHYS 5701)

**PHYS 8701. Quantum Field Theory. 3 Credit Hours.**

Properties of quantized radiation field; emission, absorption and scattering of photons by atoms; nonrelativistic Lamb shift; Dirac equation: nonrelativistic limit, Lorentz covariance, exact solutions; hole theory; Lagrangian field theory; field quantization; S-matrix; covariant perturbation theory; Feynman rules for QED with application to various processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 5702.

**PHYS 8702. Solid State Physics. 3 Credit Hours.**

Crystal and x-ray diffraction; lattice vibrations and thermal properties; energy bands and electronic properties; semiconductors; optical and dielectric properties; para-, ferro-, and antiferromagnetism; introduction to superconductivity and superfluidity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 5701 and PHYS 5702.

**PHYS 8703. Nuclear and Elementary Particle Physics. 3 Credit Hours.**

The Standard Model (SM); gauge invariance, non-Abelian gauge theories, SM Lagrangian, electroweak theory and QCD, Higgs mechanism, confinement; experimental considerations: accelerators and detectors, elastic scattering and form factors, deep inelastic scattering and structure functions; advanced topics in the SM: grand unification, neutrino mass, big bang cosmology, dark matter.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 5701 and PHYS 5702.

**PHYS 8704. Many Electron Theory. 3 Credit Hours.**

The course is at an intermediate level and is appropriate for students of experimental and theoretical condensed matter and AMO physics. The course familiarizes students with the theory of correlated electrons and states with broken electron symmetry, it also provides a framework for the description of experimental properties in materials with electron correlations. Topics include: Phenomenology of cohesion in molecules and solids, Many-electron wavefunctions, Functionals and their extrema, Wavefunction variational principles, Hellmann-Feynman theorem, One- and two-particle density matrices, and the electron density Wavefunction vs. density functional methods, Hohenberg-Kohn theorem, Functional derivatives, Uniform electron gas Kohn-Sham spin-density functional theory, Approximate functionals, Linear Response Theory and Stability, Collective Excitations, Superconducting Instability, Magnetic Instabilities, Charge Density Wave Instabilities in low-dimensional systems, Ferromagnetic, Spin and Orbital density wave phases, Instabilities of the Half-Filled Band, BCS Theory of Superconductivity, s, p and d wave pairing, the Integer and Fractional Quantum Hall States, Collective Excitations and Goldstone Modes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 8702.

**PHYS 8705. Advanced Topics in Nuclear and Particle Physics. 3 Credit Hours.**

The course is at an intermediate level and is appropriate for students of experimental and theoretical nuclear and particle physics. Topics include: Accelerators, Detectors, Essential elements of data analysis and statistics, Selected advanced topics in QFT, Hard scattering processes and the parton structure of hadrons, Breaking of global and local symmetries (Higgs mechanism), Effective field theory, Neutrino physics, Physics beyond the SM, Nuclear matter under extreme conditions, Overview of nuclear structure and reactions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Science & Technology.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in PHYS 8703.

**PHYS 8985. Teach in Higher Ed: Phys. 2 Credit Hours.**

Teaching in Higher Ed: Physics. This course focuses on learning theory and the best teaching practices, with the aim of preparing students for effective higher education teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PHYS 9991. Master's Research Projects. 1 to 6 Credit Hour.**

Short-term, limited research project or laboratory project in the field. This course is not the capstone project course, nor can it be used for thesis based research. The course is for master's students only, including PSM, MA or MS. This class will not confer full-time program status unless nine credits are taken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Science, Prof Science Masters.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course is required for students who are preparing for the preliminary or candidacy examination. Students should enroll after coursework is completed or when preparing for the candidacy exam until the time that the preliminary or candidacy examination is completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. All students must complete a minimum of one credit of this course. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 9995. Capstone Project. 1 to 6 Credit Hour.**

Capstone project for master's students including students in PSM, MA or MS. This class will provide full-time status. Students in PSM programs need to register for at least one credit of this course to fulfill program requirements. Additional credits may be required for specific programs. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Arts, Master of Science, Prof Science Masters.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

Course for master's thesis research. Only intended for students in thesis bearing master's programs. A minimum of one credit is required. This course will confer full-time status at the minimum credit hour registration limit of one credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 9998. Pre-Dissertation Research / Elevation to Candidacy. 1 to 6 Credit Hour.**

This course is intended for students who are performing research prior to candidacy. Students can register for this course after required courses are completed. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must be registered for this course during the semester that they are to be elevated to candidacy examination. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PHYS 9999. Dissertation Research. 1 to 6 Credit Hour.**

The course is for Ph.D. students who have been elevated to candidacy. During the course of their candidacy students must complete a minimum of two credits of dissertation research. This course will confer full-time status at the minimum credit hour registration limit of one credit. Students must complete a total of 6 credit hours of 9994, 9998 and 9999.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Physiology-Biophysics (PHBI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PHBI 0110. Human Anatomy & Physiology. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PHBI 0115. Human Physiology. 4 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PHBI 0310. Human Anatomy & Physiology. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PHBI 0315. Human Physiology. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## Podiatric Clinical Education (PCED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PCED P337. Third-year Elective Podiatric Clerkship. 4.5 Credit Hours.**

The third-year elective podiatric clerkship is an off-campus podiatric clinical experience designed to supplement the podiatric training of students for whom this is more desirable than similar training in a primary medical discipline. Students in P337 will be assigned to rotate with faculty at approved residency and clerkship sites in a mixture of office and hospital settings.

**Repeatability:** This course may be repeated for additional credit.

**PCED P381. Intro Clerkship Clinical Pod I. 13.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. The patients seen in PM typically present with a variety of chronic conditions for which they have been treated previously (such as mechanically induced keratoses of the feet as well as various nail pathologies such as onychomycosis and nail dystrophy); thus, the emphasis of this rotation is not on the initial patient evaluation. However, patients presenting for care of an established problem do develop new concerns from time to time and the student should be prepared to elicit a pertinent history and perform a focused examination appropriate to their evaluation. Furthermore, since many of the patients seen in PM have systemic disorders such as diabetes mellitus, students are expected to evaluate them for pedal manifestations which may indicate worsening of the systemic disorder and refer patients to the appropriate physician for more extensive work-up and intervention. Students should also routinely survey patients for changes in pedal risk factors such as the appearance of neuropathy and the development of pre-ulcerative lesions. Students will gain extensive experience in the recognition and management of a variety of hyperkeratotic and nail pathologies and are expected to appreciate the contributions of biomechanical factors and underlying systemic conditions to these.

**Repeatability:** This course may be repeated for additional credit.

**PCED P384. Clerkship Clinical Podiatry I. 4.5 Credit Hours.**

Clerkship in Clinical Podiatry (Surgery).

**Class Restrictions:** Must be enrolled in one of the following Classes: Third Year Podiatry.

**Repeatability:** This course may be repeated for additional credit.

**PCED P385. Clerkship Clinical Podiatry II. 4.5 Credit Hours.**

Clinical Clerkship in Podiatry (Medicine).

**Repeatability:** This course may be repeated for additional credit.

**PCED P386. Clerkship Clinical Podiatry III. 4.5 Credit Hours.**

Clerkship in Clinical Podiatry (Orthopedics).

**Repeatability:** This course may be repeated for additional credit.

**PCED P387. Medical Elective. 4.5 Credit Hours.**

Spring Clerkships for 3rd year Podiatry Students.

**Repeatability:** This course may be repeated for additional credit.

**PCED P390. Clinical Correlations for Podiatric Medicine. 4.5 Credit Hours.**

This course will combine instruction in the psychomotor skills of physical examination with high-yield focused clinical instruction using case studies, clinical vignettes, peer practice, patient simulations, and standardized patient contacts as appropriate for individual modules to develop skills in patient assessment and awareness of key issues in management of common systemic conditions and less common ones of critical importance in podiatric practice. Prerequisites: Successful completion (grade of 70 or better, or S or P as applicable) in all TUSPM didactic coursework.

**College Restrictions:** Must be enrolled in one of the following Colleges: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PCED P410. Clerkship in General Orthopedics. 4.5 Credit Hours.**

Podiatric medical students are responsible to the rotation intern, orthopedic resident(s) and the clinical orthopedic faculty for that particular orthopedic service. Podiatric medical students will be paired with a medical student for the duration of the rotation. This program is designed to have podiatric medical students become familiar with and experience orthopedic pathology to include diseases, fractures, soft tissue injuries, tumors, infections, neurological conditions, sports medicine injuries, etc.

**Repeatability:** This course may be repeated for additional credit.

**PCED P420. Clerkship in Internal Medicine. 4.5 Credit Hours.**

Students are assigned to an inpatient general medicine service where they function as part of the treatment team. Wherever possible, TUSPM students are paired with third or fourth year medical students. In any event, an intern or resident closely supervises the clinical activities of the students. Students are exposed to the usual routine of hospital based patient care and the record keeping which is required. Students are also preceptored in the work-up of patients. Attendance at all case conferences, team rounds, grand rounds, and didactic-activities are mandatory.

**Repeatability:** This course may be repeated for additional credit.

**PCED P430. Summer Clinic. 5 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**PCED P431. Clerkship Clinical Podiatry IV. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. The patients seen in PM typically present with a variety of chronic conditions for which they have been treated previously (such as mechanically induced keratoses of the feet as well as various nail pathologies such as onychomycosis and nail dystrophy); thus, the emphasis of this rotation is not on the initial patient evaluation. However, patients presenting for care of an established problem do develop new concerns from time to time and the student should be prepared to elicit a pertinent history and perform a focused examination appropriate to their evaluation. Furthermore, since many of the patients seen in PM have systemic disorders such as diabetes mellitus, students are expected to evaluate them for pedal manifestations which may indicate worsening of the systemic disorder and refer patients to the appropriate physician for more extensive work-up and intervention. Students should also routinely survey patients for changes in pedal risk factors such as the appearance of neuropathy and the development of pre-ulcerative lesions. Students will gain extensive experience in the recognition and management of a variety of hyperkeratotic and nail pathologies and are expected to appreciate the contributions of biomechanical factors and underlying systemic conditions to these.

**Repeatability:** This course may be repeated for additional credit.

**PCED P432. Clerkship Clinical Podiatry V. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. The patients seen in PM typically present with a variety of chronic conditions for which they have been treated previously (such as mechanically induced keratoses of the feet as well as various nail pathologies such as onychomycosis and nail dystrophy); thus, the emphasis of this rotation is not on the initial patient evaluation. However, patients presenting for care of an established problem do develop new concerns from time to time and the student should be prepared to elicit a pertinent history and perform a focused examination appropriate to their evaluation. Furthermore, since many of the patients seen in PM have systemic disorders such as diabetes mellitus, students are expected to evaluate them for pedal manifestations which may indicate worsening of the systemic disorder and refer patients to the appropriate physician for more extensive work-up and intervention. Students should also routinely survey patients for changes in pedal risk factors such as the appearance of neuropathy and the development of pre-ulcerative lesions. Students will gain extensive experience in the recognition and management of a variety of hyperkeratotic and nail pathologies and are expected to appreciate the contributions of biomechanical factors and underlying systemic conditions to these.

**Repeatability:** This course may be repeated for additional credit.

**PCED P433. Clerkship Clinical Podiatry VI. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. The patients seen in PM typically present with a variety of chronic conditions for which they have been treated previously (such as mechanically induced keratoses of the feet as well as various nail pathologies such as onychomycosis and nail dystrophy); thus, the emphasis of this rotation is not on the initial patient evaluation. However, patients presenting for care of an established problem do develop new concerns from time to time and the student should be prepared to elicit a pertinent history and perform a focused examination appropriate to their evaluation. Furthermore, since many of the patients seen in PM have systemic disorders such as diabetes mellitus, students are expected to evaluate them for pedal manifestations which may indicate worsening of the systemic disorder and refer patients to the appropriate physician for more extensive work-up and intervention. Students should also routinely survey patients for changes in pedal risk factors such as the appearance of neuropathy and the development of pre-ulcerative lesions. Students will gain extensive experience in the recognition and management of a variety of hyperkeratotic and nail pathologies and are expected to appreciate the contributions of biomechanical factors and underlying systemic conditions to these.

**Repeatability:** This course may be repeated for additional credit.

**PCED P434. Clerkship Clinical Podiatry VII. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. The patients seen in PM typically present with a variety of chronic conditions for which they have been treated previously (such as mechanically induced keratoses of the feet as well as various nail pathologies such as onychomycosis and nail dystrophy); thus, the emphasis of this rotation is not on the initial patient evaluation. However, patients presenting for care of an established problem do develop new concerns from time to time and the student should be prepared to elicit a pertinent history and perform a focused examination appropriate to their evaluation. Furthermore, since many of the patients seen in PM have systemic disorders such as diabetes mellitus, students are expected to evaluate them for pedal manifestations which may indicate worsening of the systemic disorder and refer patients to the appropriate physician for more extensive work-up and intervention. Students should also routinely survey patients for changes in pedal risk factors such as the appearance of neuropathy and the development of pre-ulcerative lesions. Students will gain extensive experience in the recognition and management of a variety of hyperkeratotic and nail pathologies and are expected to appreciate the contributions of biomechanical factors and underlying systemic conditions to these.

**Repeatability:** This course may be repeated for additional credit.

**PCED P440. Community Clerkship. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. This rotation will mimic a private practice setting.

**Repeatability:** This course may be repeated for additional credit.

**PCED P441. External Podiatric Clerkship I. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. This rotation will mimic a private practice setting.

**Repeatability:** This course may be repeated for additional credit.

**PCED P442. External Podiatric Clerkship II. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. This rotation will mimic a private practice setting.

**Repeatability:** This course may be repeated for additional credit.

**PCED P443. External Podiatric Clerkship III. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. This rotation will mimic a private practice setting.

**Repeatability:** This course may be repeated for additional credit.



**PCED P444. External Podiatric Clerkship IV. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. This rotation will mimic a private practice setting.

**Repeatability:** This course may be repeated for additional credit.

**PCED P446. External Podiatric Clerkship V. 4.5 Credit Hours.**

Students function as primary podiatric care providers under the supervision of the attending podiatric physician. This rotation will mimic a private practice setting.

**Repeatability:** This course may not be repeated for additional credits.

**PCED P447. External Podiatric Clerkship VI. 4.5 Credit Hours.**

Clerkship training is an integral and, therefore, required part of the curriculum of the fourth year student. The primary objective of the clerkship is to immerse the student in the highest quality educational experience possible. The following objectives are delineated for clerkship programs: 1. Provide comprehensive clinical exposure to the common problems of medicine and surgery. 2. Provide an environment in which the students can develop their clinical skills and diagnostic abilities. 3. Provide students, under attending supervision and as appropriate, an opportunity to increase their independence in treating patients. 4. Orient students to hospital-based acute care management. 5. Familiarize students with hospital operations and the role of podiatric medicine within this environment.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in PCED P441, PCED P442, PCED P443, PCED P444, and PCED P446.

**PCED P448. External Podiatric Clerkship VII. 4.5 Credit Hours.**

Clerkship training is an integral and, therefore, required part of the curriculum of the fourth year student. The primary objective of the clerkship is to immerse the student in the highest quality educational experience possible. The following objectives are delineated for clerkship programs: 1. Provide comprehensive clinical exposure to the common problems of medicine and surgery. 2. Provide an environment in which the students can develop their clinical skills and diagnostic abilities. 3. Provide students, under attending supervision and as appropriate, an opportunity to increase their independence in treating patients. 4. Orient students to hospital-based acute care management. 5. Familiarize students with hospital operations and the role of podiatric medicine within this environment.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in PCED P441, PCED P442, PCED P443, PCED P444, PCED P446, and PCED P447.

**PCED P449. External Podiatric Clerkship VIII. 4.5 Credit Hours.**

Clerkship training is an integral and, therefore, required part of the curriculum of the fourth year student. The primary objective of the clerkship is to immerse the student in the highest quality educational experience possible. The following objectives are delineated for clerkship programs: 1. Provide comprehensive clinical exposure to the common problems of medicine and surgery. 2. Provide an environment in which the students can develop their clinical skills and diagnostic abilities. 3. Provide students, under attending supervision and as appropriate, an opportunity to increase their independence in treating patients. 4. Orient students to hospital-based acute care management. 5. Familiarize students with hospital operations and the role of podiatric medicine within this environment.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in PCED P441, PCED P442, PCED P443, PCED P444, PCED P446, and PCED P447.

**PCED P495. Clinical Independent Study. 0 to 5 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

## Podiatric Interdepartmental (PDID)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PDID P390. Pod Path Lab Rotation. 0 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**PDID P391. Pod Pathology Lab. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDID P490. Pod Path Lab Rotation. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDID P491. Pod Pathology Lab. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## Podiatric Medicine (PDMD)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PDMD P130. Fundmntl of Podiatric Pract I. 3.5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P200. Fundmntl of Podiatric Pract II. 2.7 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P215. Internal Medicine. 3 Credit Hours.**

Internal Medicine is the study of the etiology, pathophysiology, clinical signs, symptoms and treatment of a wide variety of illnesses of the human body.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P230. Fundamentals of Dermatology. 2.2 Credit Hours.**

This is a course in the basic and clinical aspects of cutaneous medicine. The course provides a foundation that will enable the podiatry student to recognize and understand a number of diseases in which the skin is solely or largely the central focus of disturbance; it is also an introduction to much of medicine since the skin so often reflects internal disease.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P231. Princ of Primary Care. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P233. Physical Diagnosis. 2.5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P234. Psychiatry. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P235. Radiology. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P236. Foot and Ankle Radiology. 2.6 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P237. Vascular Disease. 2 Credit Hours.**

Students will learn to appreciate normal physiology and the underlying pathophysiology of arterial, venous and lymphatic disease and to recognize and appropriately manage common vascular disorders with a focus on the lower extremities.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P239. Infectious Disease. 1 Credit Hour.**

This course is a comprehensive lecture series on Infectious Diseases emphasizing lower extremity and systemic pathologies and treatments. Students will develop: A. An understanding of the basic concepts of Infectious Diseases and how to apply them to podiatric medicine; B. The ability to recognize common bacterial, viral and fungal infections and the likely causative organism; C. An understanding of the clinical usage of antimicrobial agents, their selection and dosing for different infections, their toxicities when used for these infections, subtle differences between agents of a class; D. The ability to recognize the special case that is the diabetic foot infection and to understand the principles of proper treatment.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P330. Fundamentals of Dermatology. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P331. Clerkship Clinical Neurology. 4.5 Credit Hours.**

Clinical Clerkship.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P332. Clerkship Periph Vascular Dis. 4.5 Credit Hours.**

Clinical Clerkship.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P333. Peripheral Vascular Dis. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P334. Clerkship Internal Medicine. 4.5 Credit Hours.**

Clinical Clerkship.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P335. Internal Medicine. 4 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P336. Neurology. 1.6 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P338. Clerkship Infectious Disease. 4.5 Credit Hours.**

Clinical Clerkship.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P339. Infectious Disease. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P371. Summer Medicine Clinic. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P381. Medicine Clinic. 10 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P420. Clerkship Internal Medicine. 4.5 Credit Hours.**

Students are assigned to an inpatient general medicine service where they function as part of the treatment team. Wherever possible, TUSPM students are paired with third or fourth year medical students. In any event, an intern or resident closely supervises the clinical activities of the students. Students are exposed to the usual routine of hospital based patient care and the record keeping which is required. Students are also precepted in the work-up of patients. Attendance at all case conferences, team rounds, grand rounds, and didactic-activities are mandatory.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P421. Clerkship Clinical Neurology. 4.5 Credit Hours.**

Students are assigned to and function as members of a neurology consult service. Students follow patients in the hospital from initial consult through resolution. Outpatient experience is highly desirable and will be integrated into this rotation through assignments to outpatient clinic sessions whenever possible. Students are instructed in the performance of a complete neurological examination and its interpretation. Attention is paid to the ordering of special studies to confirm or rule out possible diagnoses (EMG, NCV, evoked potentials, and imaging studies). While students are exposed to a broad spectrum of neurological diseases, the primary emphasis is upon patients with lower extremity manifestations (which may be due to head injury, spinal trauma, CVA, Parkinsonian syndromes and other movement disorders), and on understanding the lower extremity manifestations of each pathology encountered.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P428. Clerkship Infectious Disease. 4.5 Credit Hours.**

Students are assigned to and function as members of a medical infectious disease consult service. Students follow patients in the hospital from initial consult through resolution. In this way, the students are expected to become familiar with a variety of infectious disorders and be alert to their development in future patients. Students are also expected to gain in depth knowledge of the pathogens encountered in lower extremity infections and the diagnosis and treatment of such infections. Attendance at all case conferences, team rounds, and other didactic activities are mandatory.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P445. Clerkship in Peripheral Vascular Disease. 4.5 Credit Hours.**

The vascular clerkship student will report to the vascular surgical resident on service or the vascular surgical fellow. The contact person will function essentially as a resident. Typical hours are from 6:00 a.m. to 8:00 p.m. with opportunities for patient examination, daily monitoring and redressing as well as surgical assistance.

**Repeatability:** This course may be repeated for additional credit.

**PDMD P471. Summer Medicine Clinic. 1.6 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P508. Diabetes/Wound Care. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDMD P509. Podiatric Radiology. 1.5 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

## Podiatric Orthopedics (PDOR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PDOR P140. Intro to Biomechanics. 3 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P142. Physical Medicine and Rehabilitation. 2 Credit Hours.**

The course in Physical Medicine and Rehabilitation describes the use of various physical therapeutic modalities in the treatment of podiatric medical patients. Patient evaluation, treatment plan development and proper progress reporting will be emphasized. Provide the student with an understanding of the role of physical medicine and rehabilitation and the profession of physical therapy in the treatment of the podiatric patient. Provide the student with knowledge of all physical modalities and procedures used in the treatment of disorders of the foot and ankle (emphasis will be placed on the most commonly used treatments with only brief mention of other related modalities). Students will understand the purpose and use of the modalities and procedures presented and be able to properly prescribe and administer them in the treatment of foot, ankle, and related disorders. Students will understand both indications and contraindications for each modality and procedure presented. Students will know the elements of a complete therapeutic treatment plan and be able to record patient progress including evaluation, progress notes, goal setting with rationale and discharge. SOAP format, short and long term goal setting and functional outcome reporting will be discussed.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P240. Pathomechanics. 2 Credit Hours.**

The course reviews the single plane osseous deformities of the lower extremity and their effect on normal foot function. It also establishes all the normal criteria for foot function and the structures involved and how to alter abnormal foot function. Gait analysis including phasic activity of muscle is completely reviewed.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P241. Casting. 1 Credit Hour.**

Actual casting is demonstrated to the student for pathological traumatic conditions of the lower extremity. Students participate in the casting which provides a basic insight in the handling and application of casting.

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P242. Physical Med & Rehab. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P243. Clinic Foot Orthopedics. 1.8 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P244. Biomechanics Workshop. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P247. General Orthopedics. 2 Credit Hours.**

This course will provide a general overview of orthopedics above the ankle. Orthopedic pathologies including their clinical presentation, differential diagnosis, conservative and surgical management will be discussed. One lab session will be included covering physical examination of the knee, hip and lumbar spine.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P248. Sports Medicine. 2 Credit Hours.**

This course is concerned with the specific areas of sports and athletics and the relationship of lower extremity mechanics and function on those activities. It also concerns itself with injury in sports - mechanisms, types of injuries, treatment, and prevention. Students will learn: To explore the scope of sports practice, the ethics of the doctor-athlete relationship, and the legal liabilities of the sports physician; To identify, diagnose and treat common injuries of the foot, ankle and leg encountered in everyday practice; To understand the biomechanics of sports injuries and the use of treadmill and video analysis to examine and interpret the cause of injury in gait; To gain insight into athletic footwear and footwear prescription, and the use of foot orthoses in the treatment and prevention of sports injury; To understand the impact of nutrition and health lifestyles on the adolescent, adult, and geriatric athlete and to identify and screen physiopsychological aberrations such as eating disorders, substance abuse, "little league syndrome", and obsessive behaviors.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P340. General Orthopedics. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P341. Clrkshp Gen Orthopedics. 4.5 Credit Hours.**

Clinical Clerkship.

**Repeatability:** This course may be repeated for additional credit.

**PDOR P342. Pediatric Foot Orthopedics. 1.8 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P343. Sports Medicine. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P344. Orthotics & Prosthetics. 2.5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P346. Traumatology. 1.75 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P372. Summer Orthopedics Clin. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P382. Orthopedics Clinic. 10 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P391. Casting. 1 Credit Hour.**

Actual casting is demonstrated to the student for pathological traumatic conditions of the lower extremity. Students participate in the casting which provides a basic insight in the handling and application of casting.

**Repeatability:** This course may not be repeated for additional credits.

**PDOR P410. Clerkship General Orthopedics. 4.5 Credit Hours.**

Podiatric medical students are responsible to the rotation intern, orthopedic resident(s), and the clinical orthopedic faculty for that particular orthopedic service. Podiatric medical students will be paired with a medical student for the duration of the rotation. This program is designed to have podiatric medical students become familiar with and experience orthopedic pathology to include diseases, fractures, soft tissue injuries, tumors, infections, neurological conditions, sports medicine injuries, etc.

**Repeatability:** This course may be repeated for additional credit.

**PDOR P472. Summer Orthopedics Clin. 1.6 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

## Podiatric Surgery (PDSR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PDSR P250. Principles of Podiatric Surgery I. 2.8 Credit Hours.**

This course will expose the podiatric medical student to various introductory aspects of foot surgery, such as charting and informed consent, wound healing, wound closure, bone healing, tendon, ligament, nerve healing, and repair, as well as various technical aspects of surgery, such as hemostatic techniques, dressing and a comprehensive overview of the principles and techniques of modern anesthesia.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P252. Principles of Podiatric Surgery II. 2.5 Credit Hours.**

A comprehensive one-semester, 4-hour-per-week course dealing with soft tissue and osseous pathology affecting the toes and lesser metatarsus. The structure and function of the forefoot will be discussed, and patient evaluation and preoperative management will be described. Emphasis will be placed on specific reconstructive surgical procedures, both historical and currently used, with detailed attention being paid to sound surgical principles, rationale for selection, step-by-step performance, and objective postoperative assessment. Following completion of this course, the student will be expected to have the didactic knowledge necessary for the development of a functional clinical and practical understanding of forefoot surgery. Basic surgical principles and a thorough knowledge of the surgical anatomy of the toes and lesser metatarsus will serve as the foundations for this clinical and practical understanding of forefoot surgery.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P253. O R Protocol. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P257. Podiatric Surgical Skills. 2.4 Credit Hours.**

This is a laboratory course that offers an overview of commonly performed podiatric surgical procedures and techniques. To allow the podiatric medical student hands-on experience in performing surgical procedures upon cadaver and demonstrating manual skill techniques common to first degree level podiatric practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P352. Princ First Ray Surgery. 2.6 Credit Hours.**

This course deals with the etiology, clinical, x-ray criteria and surgical approaches for the correction of hallux valgus deformity, hallux limitus deformity and related conditions. Content to be learned includes the clinical examination of patients with hallux abductus deformity together with the x-ray interpretation of hallux abductus deformity. Also covered is an overview of the most current procedures commonly used for correction of this deformity together with postoperative care and complications which can develop from surgical correction. The method of instruction used will be lectures aided by power point presentations. At the completion of this course, the student will be expected to clinically evaluate patients with 1st metatarsophalangeal joint deformity, evaluate the same patient with regard to x-ray criteria, logically formulate a treatment plan including surgical procedure and post-op management, and be able to describe surgical procedures used to correct 1st MPJ deformities and be familiar with possible complications of these procedures and their treatment.

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P353. Reconstruct Surgery Foot & Leg. 2.6 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P355. Podiatric Surgical Skills. 2 Credit Hours.**

This is a one-semester laboratory course that offers an overview of commonly performed podiatric surgical procedures and techniques. The course allows the podiatric medical student hands-on experience in performing surgical procedures upon a cadaver and demonstrating manual skill techniques common to first degree level podiatric practice.

**Class Restrictions:** Must be enrolled in one of the following Classes: Second Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P356. Anesthesia. 2.5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P383. Surgery Clinic. 10 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P473. Summer Surgery Clinic. 1.8 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P505. Cadaver Surgery. 2.5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P506. First Ray Surgery. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PDSR P507. Dig Met Surg Review. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

## Political Science (POLS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**POLS 8000. Topics in Research Design. 3 Credit Hours.**

Students learn how to formulate and justify research questions, situate their research within the scholarly literature, select cases, and address problems related to making causal inferences. An important focus of the course is on the similarities and differences between quantitative and qualitative research designs and their respective strengths and weaknesses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 8001. Political Statistics I. 3 Credit Hours.**

Required of all M.A. and Ph.D. students. Introductory applied social statistics. Topics covered include descriptive measures, elementary probability theory, hypothesis testing, and correlation and regression analysis. This course explores inductive statistics including: probability and sampling, multivariate contingency tables, analysis of variance, correlation and regression analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8002. Qualitative Research Methods. 3 Credit Hours.**

Required of all Ph.D. students. An examination of some of the major qualitative research approaches in political science -- case studies, comparative historical, institutional, community power studies, etc. The course aims to teach students the basic methods and reasoning procedures for doing advanced research in political science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in POLS 8001.

**POLS 8003. Political Statistics II. 3 Credit Hours.**

The course offers a thorough coverage of the basic linear regression model. Two-thirds of the class is devoted to the Ordinary Least Squares (OLS) method with a focus on estimation, hypothesis testing, and diagnosing threats to statistical inference. Cross-sectional, time-series, and panel data applications are covered. The remainder of the class introduces students to Maximum Likelihood estimators that address limitations to the OLS model.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** POLS 8001.

**POLS 8101. Government in American Society. 3 Credit Hours.**

An introduction to key theoretical and methodological approaches to the study of the major areas in American politics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8102. American Presidency. 3 Credit Hours.**

This course examines the state of Presidency research in political science. The American presidency is evaluated as an institution and as a position of political leadership.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8103. Legislative Behavior. 3 Credit Hours.**

Analysis and research on legislatures, legislators and the legislative process at national, state, and local levels. Focus on legislative decision-making.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**POLS 8105. Public Law. 3 Credit Hours.**

A survey of the main political and legal factors affecting the development of the basic constitutional doctrines regarding judicial review, separation of powers, the presidency, foreign affairs, the basic delegated powers of Congress in the areas of regulation of commerce and taxation, and federalism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8106. Civil Rights and Liberties. 3 Credit Hours.**

A critical overview and exploration of the evolution, and various aspects of U.S. anti-discrimination laws and policies using court decisions as well as political and legal theories.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8107. Business Politics and Power. 3 Credit Hours.**

Course examines the role of business in politics. Includes a review some of the most important theoretical approaches that dominate the study of business political activity and its impact on policy outcomes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8108. American Party System. 3 Credit Hours.**

Examines political parties and party systems at the federal and state level, in both historical and contemporary contexts. What are political parties? Who forms them? This course focuses mostly on officeholders and activists to understand political parties in government and political parties as organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8109. Campaigns, Elections, and Media. 3 Credit Hours.**

The role of elections in contemporary American society. Special attention to parties and mass media as managers of campaigns. Factors affecting the voting behavior of the mass public and the link voting provides between the public and policy formation. The role of elections in contemporary American society. Factors affecting the voting behavior of the mass public and the link voting provides between the public and policy formation. Special attention also will be paid to the roles of political parties and mass media.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8112. Research in State Politics. 3 Credit Hours.**

This course introduces graduate students to the research investigating politics and governance in the American states. Seminar discussions will focus on identifying the questions motivating state politics research, comparing different methodological approaches, and discovering what questions remain unanswered. We also will consider how findings from state politics research might extend to other institutional settings. The goal of the seminar is to stimulate students to conduct their own state politics research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8113. Politics of Race and Class in America. 3 Credit Hours.**

Examines the intersection of race and class in American cities from theoretical and practical perspectives. Readings cover some of the major theories of race and urban poverty going from the "declining significance of race" proponents on the one hand to the "increasing significance of race" theorists on the other end of the spectrum. The course also examines how considerations of race and class have shaped key policy areas such as housing, education, and community development. Finally, the course examines the "new immigration" and its impact on class and race relations within urban areas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8114. Community Based Research. 3 Credit Hours.**

Engages students in community based research projects that are identified and developed by community-based organizations to address a particular program or policy need that they have encountered. Students work closely with these organizations as they carry out the research. Field-based research is supported by weekly seminar meetings that combine instruction in research methods with substantive examination of community development issues. Students share their experiences from the field during the seminar meetings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8120. Topics in Public Policy. 3 Credit Hours.**

Special topics course. Subject varies with instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 8121. National Public Policy. 3 Credit Hours.**

Focuses on the content or substance of contemporary U.S. public policy and developing agendas in several salient areas such as environmental protection, economic development, education, public assistance, drug abuse, and civil rights.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8122. Urban Public Policy. 3 Credit Hours.**

Explores key areas of urban public policy, such as housing, economic and community development, and education. Examines the political, social, institutional and cultural factors that shape the policy making context and ultimately the policies themselves. Interdisciplinary approach using readings from political science, sociology, economics, planning and social history. Covers major research conducted on policy areas and central debates surrounding them.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8124. Public Opinion. 3 Credit Hours.**

Survey of the broad field of public opinion research. Topics include: political sophistication, citizen competence, democratic responsiveness, political socialization, attitude formation, and the effects of mass media and political rhetoric.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8125. Theories of Policy Making. 3 Credit Hours.**

Considers various models of the policy process and policymaking, including those within group, systemic, rational, and institutional approaches. Empirical and normative perspectives are both addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8130. Topics in American Politics. 3 Credit Hours.**

Special topics course. Subject varies with instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 8201. Comparative Politics. 3 Credit Hours.**

A survey of core theories, methodological approaches and central issues in the comparative study of political systems throughout the world. Issues include state, class, party systems and interest groups, dependency, democracy and autocracy, reform and revolution, ethnic/nationalist conflict, and policymaking in industrial welfare states.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8202. Comparative Politics: Advanced Industrial Nations. 3 Credit Hours.**

Comparative analysis of political systems in Western Europe. Topics covered include the development of political parties and interest group politics, political economy, the welfare state, democratization/market liberalization in Eastern Europe, and European integration (EU). NOTE: This course was previously titled "Comparative Politics: Western Europe." Be advised that students can receive credit only once for POLS 8202.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8203. Comparative Politics: Developing Nations. 3 Credit Hours.**

What are the ideological, economic, and political processes that have created "First" and "Third" worlds? Is "underdevelopment" a consequence of the international system or are its sources home-grown? What are the connections between economic processes and political change? This course compares rational, structural, and cultural approaches to the study of development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8205. Russian and Eastern European Civilizations. 3 Credit Hours.**

This course will familiarize students with the political development and transition to democracy in Russia and former republics of the Soviet Union.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8212. Democratic Politics. 3 Credit Hours.**

Free and fair elections are democracy's defining feature. This course examines the politics surrounding democratic politics, focusing on organizations, institutions, and behavior. In terms of organizations, the course pays close attention to the principle protagonists in democratic elections: political parties. We will explore the origins of political parties in general as well as the conditions giving rise to certain types of political parties. In terms of institutions, the course considers the institutions that shape the selection of political leaders in a democracy and the allocation of power across those elected officials. In particular, we will attend to electoral rules, legislative-executive relations, and the vertical allocation of authority, identifying how democracies decide on these institutions as well as exploring the varied and often far-reaching impact that these institutions have on a wide range of political and economic outcomes. Finally, in terms of behavior, we will explore how mass publics engage with democracy, largely through their participation in elections. Throughout, we will consider the experiences of both longstanding and new democracies, evaluating to what extent theories and ideas travel across contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8213. Political Economy of Development. 3 Credit Hours.**

This graduate course exposes students to the major debates in the political economy of development on the origins and transformations of three key institutional fields: the state, market institutions, and the international economy. We read classic works in political economy on the philosophical underpinnings of the role of the state in development; and more recent works on the relationship between the state and market creation, evolution, and reform in the context of global integration. We also survey selected works on the political and economic development of the newly industrialized countries of East and Southeast Asia and Latin America; developing countries in South Asia and Africa; and post-Communism in China and Russia.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8214. Political Economy of Identity in the Global Era. 3 Credit Hours.**

This graduate course explores the conceptual and theoretical tools that have been brought to bear to investigate the role of identity and relationship between economics and identity in the context of globalization, particularly post-cold war developments. It exposes students to some of the major debates on conceptualizing and operationalizing the multidimensionality of identity; the context-specific issues that make identity an important factor to explore as both a cause and an effect in a globalizing economy; and existing research on what shapes identity and the impact of identity. We ask the following questions: Why study identity? How to study identity? What causes identity? How does identity matter? We encounter these questions via existing literature across subfields of political science, sociology, and history; different methodological lens; and substantive knowledge of empirical reality.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8215. Middle East and Islamic Politics. 3 Credit Hours.**

This course is a reading-intensive graduate seminar on the comparative politics of the Middle East, and the broader Islamic world including sub-Saharan Africa, Southeast Asia, and South Asia. It focuses upon the nature of both political regimes and mass societies in this diverse geographic crescent bound by Islamic heritage and identity, and engages the following lines of inquiry: first, the distribution of democracy versus dictatorship in Islamic countries; second, the rise of Islamic social movements in both peaceful and violent manifestations; third, the role of religion in shaping political institutions and behavior in these regions; and finally, transformative changes such as popular uprisings, economic breakthroughs, and gender equality. Assignments involve weekly response papers and a final research paper.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8216. The State in Comparative Politics. 3 Credit Hours.**

This course offers an in-depth assessment of the state. It begins with the definitional question, and explores different approaches to the state. We will then proceed to historical analysis of the rise of states in Europe and other world regions. The third component of the course explores the relationship between states and societies, focusing on cases from both Europe and other world regions. Finally, the course explores the extent of state weakness around the world, and explanations for variation in the strength and stability of states, closing with two recent broad attempts to rethink the state and our relationship to it. Readings range from theoretical social science to empirical work on a variety of specific cases, and from classics in the field to new work and non-academic accounts of particular countries and regions. The course will build toward the production of a significant research paper. Students are encouraged to use this paper to explore a set of issues relevant to their research interests. Prior completion of POLS 8201 (Comparative Politics) is strongly recommended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8217. Democracy, Dictatorship, and Political Regimes. 3 Credit Hours.**

This course is a reading-intensive graduate seminar on the comparative politics of democratization and authoritarianism. It focuses upon political regimes in historical and comparative perspective, and immerses students in empirical scholarship and theoretical analysis to engage four core concerns: first, the origins of democracy, dictatorship, and hybrid regime types around the world; second, the trajectory and stability of different regimes in the modern era; third, the domestic and international causes of regime transitions, including institutional, economic, and systemic forces; and fourth, the key concepts and methodological strategies used in this field. The course draws upon countries and cases from across the world, including both West and non-Western regions, and incorporates comparative political work utilizing a variety of methodologies, including qualitative, quantitative, and formal approaches. Assignments involve regular analytical writing and original scholarship, encompassing a series of response papers throughout the term culminating in a final research paper.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8230. Topics in Comparative Politics. 3 Credit Hours.**

Special topics course. Subject varies with instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 8301. International Politics. 3 Credit Hours.**

A graduate-level introduction to theories of international politics, ranging from classical realism and liberalism through contemporary neorealist, institutionalist, constructivist and other approaches. Core course in the area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8302. International Security. 3 Credit Hours.**

Graduate-level introduction to the study of international security, addressing a range of approaches to topics such as the causes of war, the balance of power, alliances, economic statecraft and sanctions, humanitarian intervention and peacekeeping, and terrorism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8303. International Political Economy. 3 Credit Hours.**

A graduate-level introduction to the history and theory of international political economy. Topics include: states and markets; power and wealth; economic statecraft; international economic organizations; economic development; and the nature of interstate conflict and cooperation in the global economic system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8304. International Organizations. 3 Credit Hours.**

Advanced graduate seminar, which surveys the scholarly literature dealing with the role of international institutions and international organizations in world politics, and the prospects for global governance in various issue-areas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8305. US Foreign Policy. 3 Credit Hours.**

Graduate level introduction to the history and theory of American foreign policy. The seminar is arranged in three sections: the first offers a series of approaches to explaining American foreign policy, the second a survey of the past two-plus centuries of American foreign policy-making, and the last, a number of topics in contemporary foreign policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8306. Foreign Policy Analysis. 3 Credit Hours.**

Graduate-level survey of foreign policy-making in comparative perspective. The course examines various theoretical accounts of the determinants of a state's foreign policy, including factors such as leadership, bureaucratic politics, perception and misperception, interest-group politics and public opinion, and survey the empirical literature on comparative public policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8330. Topics in International Politics. 3 Credit Hours.**

Special topics course. Subject varies with instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 8401. Introduction to Political Theory. 3 Credit Hours.**

Introduction to the major conceptual issues in politics-- power, authority, equality, liberty, democracy, justice- through the reading of both classics in political thought and contemporary political theory. The course will also consider methodological issues in the social sciences and key topics in the philosophy of science and the philosophy of social science.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8403. Modern Political Philosophy. 3 Credit Hours.**

This course will be devoted to in-depth analyses of some of the formative works of modern political theory and practice that have helped to shape not only modern politics but modern cultural and psychological sensibility as well. The primary theorists that we will be analyzing are Machiavelli, Hobbes, Locke, Rousseau, Hegel, Marx, Nietzsche, and Freud, as well as some contemporary political philosophers. Texts and authors covered in this seminar will go beyond the materials covered in the Core Seminar in Political Theory.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8404. Contemporary Political Theory. 3 Credit Hours.**

Examines the rise of modern social theory (Hegel, Marx, Weber, Durkheim, Freud) as a response to the emergence of increasingly rationalized, class-stratified and bureaucratized industrial societies. Issues addressed include the relationship of the individual to society; the relationship between socio-economic and political power; the difficulty of establishing moral meaning in increasingly bureaucratic and routinized societies. The course will also examine post-modern theorists (e.g. Foucault, Derrida, Lyotard) who contend that modern social theory's anachronistic hypothesis of rational, industrial societies cannot adequately explain post-modern, commodified societies increasingly "decentered" by differences of culture, race, and gender. NOTE: This course was previously titled "19th and 20th Century Political and Social Thought." Students can receive credit only one time for POLS 8404.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8405. Theories of Democracy. 3 Credit Hours.**

Considers the defenses, criticisms, and varieties of democracy in both the American and worldwide settings. Examines the relationship between liberalism and democracy, as well as communitarian, conservative and radical critiques of liberal pluralism. Questions explored include: Can minority rights be guaranteed in a majoritarian democratic system? What are the cultural and socioeconomic prerequisites for a democratic society? Does the distribution of power in America today conform to the norms of a democratic society? NOTE: This course was previously titled "Contemporary Theories of Democracy." Please be advised that students will receive credit only once for POLS 8405.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 8430. Problems in Political Philosophy. 3 Credit Hours.**

An examination of some central themes and issues in political philosophy conducted through the study of one or more major works of political philosophy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 8440. Special Topics in Political Philosophy. 3 Credit Hours.**

Special topics course. Subject varies with instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 8601. Teaching Methods. 1 Credit Hour.**

Required of all M.A. and Ph.D. students wishing to be considered for financial aid. This course is to be offered once each year. No student will be awarded financial assistance for a second year without having successfully completed this course. This course is conducted on a Pass-Fail basis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**POLS 9083. Directed Study and Research I. 1 to 3 Credit Hour.**

Fall credit for special study/research with a professor outside of a regularly scheduled course. A letter grade of A, B, C, or F is awarded. A student may register for this course only with the advance approval of the pertinent faculty member and the Graduate Chair.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 9183. Directed Study and Research II. 1 to 3 Credit Hour.**

Spring credit for special study/research with a professor outside of a regularly scheduled course. A letter grade of A, B, C, or F is awarded. A student may register for this course only with the advance approval of the pertinent faculty member and the Graduate Chair.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 9283. Directed Study and Research III. 1 to 3 Credit Hour.**

First summer session credit for special study/research with a professor outside of a regularly scheduled course. A letter grade of A, B, C, or F is awarded. A student may register for this course only with the advance approval of the pertinent faculty member and the Graduate Chair.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

The purpose of such credit is to assure continuous enrollment as required by the University while one is preparing for M.A. or Ph.D. comprehensive or Preliminary examinations. A grade of "R" is awarded the student by the Graduate Chair or other faculty designated by the Chair of the Department. The semester in which the Preliminary exams are passed, a grade other than "R" is awarded.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Three credits are required in the initial semester following the Preliminary Examinations while the Ph.D. student prepares the dissertation prospectus through a reading course with their primary dissertation supervisor. During subsequent semesters, if not yet advanced to candidacy, students continue to enroll in the 1-credit option in order to assure continuous enrollment as required by the university. Students must participate in the seminar until they execute a completed dissertation proposal. A grade of "R" is awarded until the student passes the prospectus defense. At the semester of passing the prospectus, the grade of "Pass" will be awarded to only that semester's 9998.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**POLS 9999. Dissertation Research. 1 to 3 Credit Hour.**

Dissertation Research credit maintains the continuous enrollment as required by the University after a student has passed the Ph.D. comprehensive exam and prospectus defense. This is the minimum credit required each semester after the proposal defense and while the student is researching and writing the dissertation. A minimum of 6 s.h. of POLS 9999 must be completed before defending the Ph.D. dissertation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Portuguese (PORT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PORT 5000. Special Topics in Portuguese. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PORT 5101. Brazilian Short Story. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PORT 5102. Contemporary Portuguese and Brazilian Literature. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Psychiatry & Behavioral Science (PSYM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PSYM M162. Addiction Medicine. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PSYM M165. Intro to C&L Psychiatry. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PSYM M242. Interv the Ill & Dying. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PSYM M243. Intro to Child Psychiatry. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**PSYM M251. Rel/Spirit Clin Practice. 0 Credit Hours.****Course Attributes:** M2**Repeatability:** This course may not be repeated for additional credits.**PSYM M266. Psychiatry: A Narrative Pursuit. 0 Credit Hours.**

The objective of this course is to expose students to the experience of mental illness through various narratives. Psychiatry as a discipline has a unique relationship with language and story telling. The psychiatric exam itself relies almost solely on the narrative that exists between physician and patient; in addition, psychiatric illness can be seen as a narrative that is both intrinsic and extrinsic to the mind of the affected person. This course will review a myriad of different texts in order to gain a view into the nuances of mental illness, as well as into the extraordinary relationship between patient and doctor of the mind. The goal of the course is to build narrative competence such that students will be better situated to approach the care of patients living with mental illness. By the end of the course, students will understand how narrative competence can inform psychiatric practice, and how narrative medicine can enhance physician empathy toward these patients who are often misunderstood. Using techniques such as close reading and textual analysis, this course will explore relationships between mental illness, patient, and caregiver. Following discussion of a text, students will be asked to participate in unstructured writing; the intent of this exercise is to encourage students to make a connection between readings and their own experience, as humans, and as physicians-in-training. Sharing of personal stories, as written or spoken narratives, will allow students to broaden their concept of what it means to be a psychiatrist in a multicultural world.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Medicine.**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Medicine.**Repeatability:** This course may not be repeated for additional credits.**PSYM M300. Career Exploration of Psychiatry Consultation-Liaison. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.**PSYM M340. Psychiatry. 0 Credit Hours.****Course Attributes:** M7**Repeatability:** This course may not be repeated for additional credits.**PSYM M372. Career Exploration of Child Psychiatry. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.**PSYM M700. General Psychiatry. 0 Credit Hours.****Course Attributes:** M2**PSYM M701. General Psychiatry/Outpatient. 0 Credit Hours.****Course Attributes:** M2



**PSYM M702. Child and Adolescent Psychiatry. 0 Credit Hours.**

The purpose of this elective is to provide fourth-year medical students experience with psychiatric disorders in children and adolescents. Students will gain exposure, during the one month of child psychiatry, to the diagnosis, treatment, and management of behavioral, psychotic and mood disorders, anxiety, trauma, PTSD, ADHD, and autism. They will also become familiar with age-appropriate psychiatric history-taking in children and adolescents and normal developmental stages and milestones. They will also learn to recognize broad patterns of developmental disease and propose treatment of common childhood psychiatric disorders. Students will also have the opportunity to participate in family meetings to review assessment, diagnosis, and treatment.

**Repeatability:** This course may not be repeated for additional credits.

**PSYM M707. C & L Psychiatry. 0 Credit Hours.**

**Course Attributes:** M2

**PSYM M711. Emergency Psychiatry. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PSYM M713. Addiction Psychiatry Elective. 0 Credit Hours.**

There is a critical need for medical students to be exposed to the diagnosis and treatment of co-occurring addiction and mental and emotional illnesses. Addiction Psychiatry is a 4th year elective designed to expose medical students to the diagnosis and treatment of substance abuse disorders. Students will be paired with faculty treating patients for substance abuse in both the inpatient and outpatient settings. Students will be exposed to treating patients for withdrawal in the acute care setting and outpatient maintenance care. The importance of transitional care will be highlighted with particular attention to socioeconomic challenges experienced by patients with drug dependence.

**Repeatability:** This course may be repeated for additional credit.

**PSYM M719. Geriatric Psychiatry. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PSYM M735. Eating Disorder. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PSYM M736. Substance Abuse. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**PSYM M890. Psychiatry Subinternship. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may be repeated for additional credit.

## Psychology (PSY)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PSY 5003. Advanced Statistics. 3 Credit Hours.**

This course is primarily meant to prepare master's-level psychology students to conduct statistical analyses on data related to their research, and to prepare them for more advanced courses, such as multivariate statistics (PSY 8031). Topics will include linear regression, repeated-measures ANOVA, multi-factorial ANOVA, and several nonparametric alternatives to "standard" inferential tests. In addition to significance testing, this course will focus on the measurement and interpretation of effect size and power. Students will also learn how to perform data analysis using the SPSS statistical software package.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 5100. Topics: Brain, Behavior and Cognition. 3 Credit Hours.**

This graduate course is to be offered for graduate students interested in the topical course designated PSY 3100 but wish to work with the instructor to earn graduate credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 5103. Learning and Behavior Analysis. 3 Credit Hours.**

A systematic introduction to the principles of behavior analysis with emphasis on their application as well as their origins in basic research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 5104. Ethics and Ethical Conflicts in Psychological Science. 3 Credit Hours.**

Psychologists are bound by an official code of conduct that includes general ethical principles, as well as specific enforceable standards for ethical conduct in research, education and training, public service, and clinical practice. This course will use a case study approach with fine-grained analyses of ethical conflicts to learn and understand the ethical standards set forth in the American Psychological Association's *Ethical Principles of Psychologists and Code of Conduct* (APA, 2010). We will consider both historical and recent cases of ethical misconduct in research, the concept of evidence-based treatment, and newly emerging ethical dilemmas in the field of cognitive neuroscience and imaging. Case studies and discussions will include ethical conduct relevant for graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in PSY 5791 and PSY 5891.

**PSY 5791. Master's Directed Research I. 1 to 4 Credit Hour.**

This course is open to students in the first year of the Master of Science in Psychological Research program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 5891. Master's Directed Research II. 1 to 4 Credit Hour.**

This course is open to students in the first year of the Master of Science in Psychological Research program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8005. Affective Neuroscience. 3 Credit Hours.**

The brain is not just a thinking machine; it is also a feeling machine. This course explores the neural substrates behind emotions such as love, trust, fear, and pleasure. We will also discuss the relationship between emotions and cognition, the effect of emotions on animal and human behavior, and the biological basis of affective disorders such as anxiety and depression.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8011. Graduate Statistics I. 3 Credit Hours.**

Review of hypothesis-testing methods for means, variances, correlations, and proportions. One-way ANOVA for completely randomized, blocked, and repeated measure designs. Planned and post hoc multiple comparisons.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8015. Teaching of Psychology. 0 to 1 Credit Hours.**

Required of all graduate teaching assistants during their first semester of teaching. Designed to assist and prepare them for their teaching duties. Supervision and feedback are used to promote effective communication and teaching skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**PSY 8016. Professional Development Seminar. 2 Credit Hours.**

This course is taken concurrently with PSY 8015, the Professional Development Seminar Series (PDS). The course will provide in-depth coverage of issues introduced at PDS seminars and roundtables, along with supporting activities and discussions relevant to students working towards the MS degree in Psychological Research. Students engage in structured written exercises that reinforce necessary professional skills, including preparation of CVs, abstracts for conference presentations, peer review of manuscripts, and grant writing. The major project in this course will be preparation of a draft for a National Science Foundation Graduate Research Fellowship application.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** PSY 8015.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in PSY 5003, PSY 5791, and PSY 5891.

**PSY 8017. Professional Issues for Psychology Careers. 0 or 1 Credit Hours.**

This course provides first-year Psychology PhD students and 4+1 Psychology students in their Masters year with an introduction to graduate school and to the profession of psychology. It comprises the first half of a one-year sequence in professional development. The full sequence includes this course each Fall and Teaching of Psychology (PSY 8015) that is offered each Spring semester. These courses are designed to provide graduate students with information that most faculty have learned only through direct (and not always successful!) experiences. Academic psychology has both explicit and implicit (i.e., tacit) knowledge and rules that underlie the success of individuals in the system. The formalized rules and knowledge are available and relatively easy to acquire; the tacit knowledge is harder to discern and, thus, to acquire. Graduate advisors mentor students to prepare them for successful postgraduate careers, and each program in the department emphasizes the development of particular skills. However, some topics are better addressed through a class environment. By helping to demystify the academic path, this course will place the preparation for successful post-graduate careers at the beginning, rather than the end, of our graduate program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8021. Graduate Statistics II. 3 Credit Hours.**

Multiway ANOVA for completely randomized and repeated measures, nested designs, covariance designs. Simple effects and planned and post hoc comparisons. Use of available statistical computer programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in PSY 8011.

**PSY 8031. Survey of Multivariate Techniques. 3 Credit Hours.**

Beginning with bivariate correlation and regression, generalizations are made, through the aid of matrix algebra, to multiple regression and correlation. Multivariate techniques also include principal components, canonical correlation, and multivariate analysis of variance use of available statistical programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** PSY 8011.

**PSY 8032. Structural Equation Modeling. 3 Credit Hours.**

This graduate course overviews the application of structural equation modeling to various analysis problems confronted throughout the social, behavioral, and health sciences. Topics will include confirmatory factor analysis, measurement and structural models, path analysis, mediation, latent growth modeling, assessing model fit, and implementation of methods in statistical software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** PSY 8021.

**PSY 8033. Hierarchical Linear Modeling. 3 Credit Hours.**

Usually, this takes the form of individuals nested in bounded social organizations (e.g., students nested in schools or residents nested in neighborhoods), speaking to issues of social influence that the social sciences endeavor to address. This course will introduce students to HLM techniques, with a focus on practical applications of HLM. The course will focus on HLM applications to single continuous outcomes—analyzing the effects of context on individual outcomes and analyzing longitudinal data. HLM for binary outcomes and multivariate situations (multiple dependent variables) and (time allowing) HLM for cross-nested designs will also be covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** PSY 8021.

**PSY 8110. Topical Seminars in Experimental Psychology. 3 Credit Hours.**

Examination of different topics within experimental psychology, varied from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8310. Topical Seminar in Cognitive Psychology. 3 Credit Hours.**

Topics vary from semester to semester. Students may repeat this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8312. Core Course in Cognitive Psychology. 3 Credit Hours.**

Review of theory and research in the areas of memory, language, and thinking.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8410. Multicultural Issues in Clinical Psychology. 3 Credit Hours.**

Topics such as depression, sexuality, neuropsychology, death and dying, stress, impulsivity, specialized treatment approaches, and others are varied from semester to semester according to programmatic needs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8411. Cognitive-Behavioral Therapies. 3 Credit Hours.**

Surveys cognitive-behavioral approaches to the treatment of the major classes of mental, behavioral and emotional disorders. Emphasis is placed on cognitive-behavioral models and case formulation as well as empirical evaluation of the relevant cognitive-behavioral treatment outcome literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8412. Core Course in Psychopathology. 3 Credit Hours.**

The course will review concepts, theory, and research in psychopathology. Behavioral, cognitive, interpersonal, psychodynamic, sociocultural, genetic, and biological/neuroscience aspects of psychopathology will be covered as appropriate, depending on the disorder. The course will emphasize descriptive psychopathology (e.g. phenomenology, epidemiology, course of disorder) and issues of etiology, rather than treatment, although some work on treatment will also be discussed. The major goals of the course are knowledge of the nature of various mental disorders and what is known about their causes and risk factors, an appreciation of important issues in psychopathology, and development of the ability to think clearly and critically about these issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8413. Psychological Assessment I. 3 Credit Hours.**

A year-long course; surveys concepts of intelligence and teaches the administration, scoring, and interpretation of individually administered tests. The evaluation of learning disabilities and neuropsychological disorders is also covered. Surveys the diagnostic system of mental disorders. Teaches the administration, scoring, and interpretation of projective tests and other procedures used to identify and understand clinical dynamics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8420. Topical Seminars in Clinical Psychology. 3 Credit Hours.**

Topics such as depression, sexuality, neuropsychology, death and dying, stress, impulsivity, specialized treatment approaches, and others are varied from semester to semester according to programmatic needs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8423. Psychological Assessment II. 3 Credit Hours.**

A year-long course; surveys concepts of intelligence and teaches the administration, scoring, and interpretation of individually administered tests. The evaluation of learning disabilities and neuropsychological disorders is also covered. Surveys the diagnostic system of mental disorders. Teaches the administration, scoring, and interpretation of projective tests and other procedures used to identify and understand clinical dynamics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8430. Topical Seminars in Clinical Psychology IV. 3 Credit Hours.**

Topics such as depression, sexuality, neuropsychology, death and dying, stress, impulsivity, specialized treatment approaches, and others are varied from semester to semester according to programmatic needs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8433. Clinical Psychology: Scientific and Professional Dimensions. 3 Credit Hours.**

History, ethics, research and service methodologies, psychometrics, and topical discussions pertinent to the relationships between psychological science and the practice of clinical psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8481. Social, Cognitive, and Developmental Aspects of Behavior. 3 Credit Hours.**

This is a general graduate level survey course that will include three 5-week evaluated education experiences (EEE's) focusing on each of (a) social aspects of behavior (b) cognitive aspects of behavior and (c) developmental aspects of behavior. The social EEE will include topics such as group processes, attributions, discrimination and attitudes. The developmental EEE will include topics such as transitions, growth, and development across an individual's life. The cognitive EEE will include topics such as learning, memory, thought processes, and decision-making. As a part of each EEE, students will be assigned primary readings of classic articles in the area as well as recent research findings. This course is designed to meet the American Psychological Association requirements for discipline specific knowledge in social, cognitive, and developmental aspects of behavior.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8510. Topical Seminar in Developmental Psychology I to IV. 3 Credit Hours.**

In different semesters these courses focus on topics such as aging, adolescence, infancy, language development, learning and memory development, perceptual development, and theories of development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8512. Core Course in Developmental Psychology. 3 Credit Hours.**

Consideration of theories and related research on human development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8610. Topical Seminar in Organizational-Social. 3 Credit Hours.**

Topics selected depend on the current emphasis in the field and interests of the students. A student may repeat this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 8612. Core Course in Social Psychology. 3 Credit Hours.**

A survey of theoretical foundations and the substantive and methodological issues of social psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 8712. Core Course in Behavioral Neuroscience. 3 Credit Hours.**

An examination of brain-behavior relationships in the context of evolution.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 9187. Clinical Practicum. 3 Credit Hours.**

Under the auspices of the Psychological Services Center, students work with a different faculty member for each of four semesters. Each semester will emphasize either a different client population or a different orientation to the assessment and treatment of child, family, and adult disorders. Faculty assignments and the focus of group supervision vary from semester to semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Psychology, Psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9283. Readings in Psychology. 1 to 3 Credit Hour.**

A post-master's advanced tutorial course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9287. Clinical Practicum. 3 Credit Hours.**

Under the auspices of the Psychological Services Center, students work with a different faculty member for each of four semesters. Each semester will emphasize either a different client population or a different orientation to the assessment and treatment of child, family, and adult disorders. Faculty assignments and the focus of group supervision vary from semester to semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Psychology, Psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9387. Clinical Practicum. 3 Credit Hours.**

Under the auspices of the Psychological Services Center, students work with a different faculty member for each of four semesters. Each semester will emphasize either a different client population or a different orientation to the assessment and treatment of child, family, and adult disorders. Faculty assignments and the focus of group supervision vary from semester to semester.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Psychology, Psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9411. Clinical Research Methodology. 3 Credit Hours.**

Focuses on design issues and major methodological problems in research on such topics as psychotherapy outcome, characteristics of diagnostic groups, and stress in families. Particular attention is given to internal and external validity threats, advantages and disadvantages of assessment methods, principles of test construction, challenges and alternatives to traditional research methods, single subject designs, and approaches to integrating clinical research and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PSY 9485. Ph.D. Internship Course. 1 to 6 Credit Hour.**

For clinical students only who are on internship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9487. Clinical Practicum. 3 Credit Hours.**

Under the auspices of the Psychological Services Center, students work with a different faculty member for each of four semesters. Each semester will emphasize either a different client population or a different orientation to the assessment and treatment of child, family, and adult disorders. Faculty assignments and the focus of group supervision vary from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9587. Clinical Practicum. 3 Credit Hours.**

Under the auspices of the Psychological Services Center, students work with a different faculty member for each of four semesters. Each semester will emphasize either a different client population or a different orientation to the assessment and treatment of child, family, and adult disorders. Faculty assignments and the focus of group supervision vary from semester to semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9987. Assessment Practicum. 3 Credit Hours.**

The assessment practicum is designed to provide clinical students in-depth training in comprehensive psychological/neuropsychological assessment. Under the auspices of the Psychological Services Center, students work with a faculty member who is a licensed psychologist for two semesters conducting psychological assessments. Integration of test results and other sources of information (e.g., interview, medical history, informant reports, etc.) will be emphasized. Additionally, the assessment practicum will focus on generating recommendations based on the psychological/neuropsychological assessment and communicating results to clients and referral sources.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in PSY 8413 and PSY 8423.

**PSY 9991. Research. 1 to 6 Credit Hour.**

Intended to meet the needs of students who desire to carry on an individual investigation while working for the master's degree.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Preparation for the preliminary examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Independent research for the dissertation proposal. Registration each semester required until approval and elevation to candidacy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PSY 9999. Ph.D. Dissertation Research. 1 to 6 Credit Hour.**

After passing the preliminary examinations and having an approved proposal, Ph.D. students must register each semester for this course until the completion of the dissertation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Public Policy (PLCY)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**PLCY 5000. Topics in Non-Profit Management. 3 Credit Hours.**

Special topics related to the management, finances, funding, activities and/or impacts of nonprofit organizations. Specific topic varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PLCY 5001. Non-Profit Organization and Management. 3 Credit Hours.**

The course focuses on the organizational features, management, and evaluation of non-profit organizations. It is primarily for individuals who currently work in or with non-profit organizations or who may be interested in employment within them. To help prepare these practitioners, the course focuses less upon the development of theory and purely academic topics and more on the application of theory and the real-world goals, challenges and behavior of non-profit organizations. At the same time, the course offers a broad perspective on how non-profits are established, managed and evaluated that goes beyond merely describing their nuts-and-bolts operations. Ph.D. students and others with an academic interest in non-profit organizations will gain an in-depth understanding of why these organizations exist and how they behave.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PLCY 5002. Non-Profit Fundraising. 3 Credit Hours.**

Fundraising is a crucial element of leading and managing non-profit organizations. Most non-profits do not have readily available sources of revenue built into the logic of their organization (such as the power to tax in the case of public sector organizations and the profit motive in the case of business enterprises). Therefore, teaching students how to locate, attract and cultivate donors and how to acquire and manage financial resources is of the utmost practical value. This course covers the fundraising process from start to finish, beginning with identifying potential donors and ending with evaluating a fundraising campaign.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PLCY 5001 (may be taken concurrently)

**PLCY 5003. Financial Management for Non-Profit Organizations. 3 Credit Hours.**

Managing finances is an essential skill of nonprofit managers because their organizations cannot attain most of their goals without remaining in sound financial health. This course provides a foundation in nonprofit finance and accounting concepts and techniques. It highlights the similarities and differences along a variety of dimensions between nonprofits and for-profit and public sector organizations. The specific topics covered include: distinguishing among different kinds of budgets, budgetary planning and making spending and revenue projections, cash flow management, endowment management, capital financing, expenditure control and audits, how to read different financial statements and reports.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PLCY 5001 (may be taken concurrently)



**PLCY 5004. Leadership in Public Sector and Non-Profit Organizations. 3 Credit Hours.**

This course focuses on the tasks of leadership in public sector and nonprofit organizations, leadership behavior and how leaders succeed or fail to promote the mission and goals of their organizations. Among the topics covered are types of leaders, the constraints of organizational context and culture on leaders' influence, decision-making processes and practices that help to avoid mistakes, developing organizational priorities and strategies, building effective teams, handling ethical quandaries, and how to measure leaders' effectiveness.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in PLCY 5001 (may be taken concurrently)

**PLCY 5085. Internship in Public Policy. 3 Credit Hours.**

Students in the MPP program must serve in an approved internship of approximately 16 hours per week during the fall or spring semester (or approximately 32 hours per week during a summer session). Students earn 3 credits for paid and unpaid internships. The internship may be in a federal, state or local agency in the executive or legislative branches of government or in a private or non-profit firm that works closely with such an agency to fulfill the agency's mission.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Public Policy.

**College Restrictions:** Must be enrolled in one of the following Colleges: Liberal Arts.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of C in (PLCY 8119 (may be taken concurrently) or POLS 8119 (may be taken concurrently)) and (PLCY 8123 (may be taken concurrently) or POLS 8123 (may be taken concurrently))

**PLCY 8001. Statistics for Public Policy. 3 Credit Hours.**

Introductory applied social statistics for public policy. Topics covered include descriptive measures, elementary probability theory, hypothesis testing, and correlation and regression analysis. This course explores inductive statistics including: probability and sampling, multivariate contingency tables, analysis of variance, correlation and regression analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PLCY 8118. The Policy-Making Process. 3 Credit Hours.**

This course explores the process through which federal and state governments in the United States formulate and implement public policies. Major political and institutional actors that influence policy-making are covered, including public opinion, interest groups, legislatures, bureaucracies and chief executives, and courts. The course covers how problems are recognized and get "framed" by advocates and policymakers and how they reach the agenda, how alternatives are formulated and adopted, the implementation and evaluation of policies and programs, and how the performance and structure of existing policies feed back into the process as policies undergo expansion, revision or termination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Liberal Arts.

**Repeatability:** This course may not be repeated for additional credits.

**PLCY 8119. Policy Analysis. 3 Credit Hours.**

This course is an introduction to policy analysis for MPP students. Policy analysis involves collecting and analyzing information pertinent to public policy issues and solutions and communicating them clearly to a client, which is usually a policymaker or administrator of a program. Policymakers need analyses that clearly define and describe the nature and severity of an issue, assess the feasibility and estimate the costs and benefits of alternative solutions for addressing them, and (often) recommend one or more courses of action over others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Liberal Arts.

**Repeatability:** This course may not be repeated for additional credits.

**PLCY 8120. Topics in Public Policy. 3 Credit Hours.**

Explores in-depth a particular public policy issue area (such as education, health, public finance, etc.) or a thematic topic (such as leadership and public policy, ethics and public policy, etc.). Topic(s) covered varies with instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**PLCY 8123. Bureaucracy and Public Management. 3 Credit Hours.**

Bureaucracies and the public managers who inhabit them are of critical importance for the formulation, implementation and evaluation of public policies. This course provides students with an overview of bureaucratic agencies as key actors who shape public policy and performance. One focus of the course is how the institutional features of bureaucracies as large, complex organizations and of the broader political system in which they operate shape agencies' behavior. The other major focus is on how the leaders, managers and staff work together to shape bureaucratic cultures, missions and operating procedures and how these, in turn, determine whether the agency is capable of carrying out policies effectively and in accord with legislative mandates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PLCY 8127. Public Policy Project. 3 Credit Hours.**

A semester-length project that students take in their last semester in the MPP program. They produce an original, full-length policy analysis for a client. Students attend a weekly seminar to report on their progress at each stage in the development of their policy analysis, receive feedback from other seminar participants, and provide advice to other students in the seminar.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Public Policy.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in POLS 8001 and (PLCY 8119 or POLS 8119)

**PLCY 8128. State and Local Budgeting. 3 Credit Hours.**

Examines the economic and political aspects of the budgetary process in government, particularly at the state and local levels. Topics covered include the major sources and types of revenue, discretionary and non-discretionary spending, managing deficits and debt, forecasting fiscal conditions, capital budgeting, pension management, and other issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**PLCY 8131. Innovation in Government. 3 Credit Hours.**

Innovation is considered a critical component of both private industry and the academic research community, but the concept is also highly relevant for government. While its outcomes may look differently in a government setting and focus more on efficiencies and social benefit rather than new products or services, innovation remains a critical part of any successful government. Without setting the stage for innovation and purposefully managing it, government lacks capacity for improving constituent services, engaging purposefully with its neighborhoods and residents, and developing more efficient and cost-effective internal processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (PLCY 8118 (may be taken concurrently) or PLCY 8123 (may be taken concurrently))

## Radiation Oncology (RAON)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**RAON M167. Intro to Clinical Oncology. 0 Credit Hours.**

This didactic course will provide an overview of major concepts of caring for a patient with malignant disease. Physicians from Temple University Hospital Cancer Center will discuss diagnosis, staging, role of treatment modalities including surgery, chemotherapy, radiotherapy and interventional radiology, supportive care and long term follow up for a cancer patient.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Medicine.

**Repeatability:** This course may be repeated for additional credit.

**RAON M168. Intro/Radiation Oncology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**RAON M300. Career Exploration of Radiation Oncology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**RAON M730. Radiation Oncology. 0 Credit Hours.**

## Radiology (RADI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**RADI M101. Introductory Elective. 0 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**RADI M137. New Diag Imaging Techn.. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**RADI M140. Intro to Diag Imaging. 0 Credit Hours.**

**Course Attributes:** M4

**Repeatability:** This course may not be repeated for additional credits.

**RADI M234. Intro to Nuclear Med.. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**RADI M300. Career Exploration of Radiology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**RADI M302. Career Exploration of Vascular and Interventional Radiology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**RADI M553. Clin Thoracic Imaging. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**RADI M596. Nuclear Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**RADI M599. Neuroradiology Elective. 0 Credit Hours.**

This is a four-week elective rotation for fourth year medical students. The student will predominantly spend time in the neuroradiology reading room, and work one-on-one with the attendings and residents on service. The student is expected to participate in reading studies during the elective. When not directly participating in reading a study, the student is encouraged to observe the resident or attending reading studies. During the first morning of the rotation, the student will be oriented by the course director (or another attending) to the mechanics of the section. Students are expected to review studies, read patient history in electronic medical records, and present the case to the attending. Students are asked to be on service by 7:30 AM.

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**RADI M718. Abdominal Imaging. 0 Credit Hours.**

This course provides students an opportunity to directly observe and participate in day to day medical practice in the radiology reading room with faculty and residents in the abdominal imaging department. Major modalities include x-ray and fluoroscopy of the GI/GU tract, CT of the abdomen and pelvis, ultrasound, and MRI of the abdomen and pelvis. Students will be exposed to a wide range of pathology and should gain a reasonable understanding of the workflow and challenges faced in abdominal imaging. This course should aid in future practice of students pursuing the fields of radiology, surgery, internal medicine, urology, obstetrics/gynecology, pathology and emergency medicine.

**Repeatability:** This course may be repeated for additional credit.

**RADI M720. Radiology. 0 Credit Hours.**

**Course Attributes:** M2

**RADI M722. Interventional Radiology. 0 Credit Hours.**

**Course Attributes:** M2

**RADI M729. Pediatric Radiology. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**RADI M737. Diag Imag in Rad Onc. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**RADI M749. Musculoskeletal Radiology. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

## Real Estate (RE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**RE 5101. Real Estate Finance and Capital Markets. 3 Credit Hours.**

This course is the gateway to the other courses in the MSRE program, by providing the fundamental building blocks of knowledge and technical skills needed to understand the finance of real estate. Concepts and applications will include time value of money, discounted cash flow analysis and investment forecasting and returns. Using a live case study format, we use an actual real estate investment to apply the knowledge. Students will prepare a Discounted Cash Flow analysis to report both an unleveraged and leveraged returns analysis and joint venture returns. In addition to the learning outcomes students complete a working financial model that is then used for future courses in the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RE 5102. Enterprise Real Estate Asset Optimization. 3 Credit Hours.**

Public and private enterprises in the United States control \$40 trillion of real estate assets and most are not in the real estate business. An enterprise's real estate assets are either the first or second largest balance sheet item and operating expense. Despite this reality, public and private enterprises often overlook the optimization potential of their capital dedicated to real estate. Business leaders who synchronize the dynamic, ever-changing landscape of enterprise strategy with their real estate holdings enhance liquidity and shareholder value, and insure that scarce corporate capital remains dedicated to "mission critical" activities. The course is designed to provide business and real estate students with an understanding of how real estate can be optimized within enterprises through the synthesis of all the various corporate management functions and strategic planning. The course is set up as an interactive learning and classroom experience designed to create strategic insights for business students to enhance the value of real estate assets owned and leased by public and private enterprises. The focus of the course is to provide an academic context for a unique value proposition in today's business world - identification and measurement of asset optimization for enterprises from their real estate portfolios. Learning materials will include case studies, white-papers, SAP cloud-based real estate software solutions, actual management consulting projects, and case studies relating to the field of enterprise real estate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RE 5104. Real Estate Development, Construction, and Design. 3 Credit Hours.**

This course is designed to introduce students to the complex world of real estate development. Understanding commercial real estate property and capital markets, financing, and development dynamics requires learning about types of real estate assets and interests, conveyances, government regulations on land use and zoning, highest and best use, public and private finance, mortgage markets, and valuation and marketing of space in the context of highly competitive localized and segmented markets. This course evaluates development on vacant sites as well as rehabilitation, redevelopment, and acquisition investments. The course examines raw and developed land and the similarities and differences of traditional real estate product types including office, R & D, retail, warehouses, single family and multi-family residential, mixed use, and land as well as specialty uses like golf courses, assisted living, and fractional share ownership. Emphasis is on concise analysis and decision making. The course discusses the development process with topics including market analysis, site acquisition, due diligence, zoning, entitlements, approvals, site planning, building design, construction, financing, leasing, and ongoing management and disposition. Special topics like urban redevelopment, affordable housing, place-making economic development, infrastructure, sustainability, innovation districts, public-private partnerships (P3's), project finance, and running a development company will also be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**RE 5105. Real Estate Valuation and Market Analysis. 3 Credit Hours.**

This course focuses on the theory and techniques of real estate valuation with an in-depth exposure to market analysis, highest and best, and contemporary valuation models including the three traditional to valuation: Cost, Sales Comparison, and Income Approaches. Market analysis will include the study of commercial and residential property with special emphasis on the decision matrices and processes used in feasibility studies, site selection, and marketability studies. Students will perform individual and group case study assignments, and guest speakers will complement traditional lectures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RE 5106. Infrastructure Development and Sustainability. 3 Credit Hours.**

This course provides an understanding of the demand for, and supply of, sustainable infrastructure related to the pace of urbanization across the globe. The challenges for both developing and developed countries is examined from the perspective of potential new strategies, new technologies, new business models, and new financing techniques that could make a difference in addressing a full range of infrastructure needs while addressing sustainability objectives. In terms of sustainability, this will include an understanding of the demand and supply side, cultural factors, the policy framework, and the potential impact of technology and innovation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**RE 5107. Inclusive Economic Development and Place-Making/Real Estate Innovation. 3 Credit Hours.**

Real estate is the "currency for economic development" and reimagining underutilized real estate assets and neighborhoods is one of the most under-appreciated subject areas in the real estate industry. Place-making is the process of teaching communities and their stakeholders how to "tell their market story" and create inclusive economic development and jobs through real estate innovation. This process requires a plethora of activities that includes implementing an Asset optimization plan and interacting with residents in a way that creates future demand for the commercial real estate assets within a particular location. Specifically, this experiential based course is centered on the roles of various stakeholders in the place-making process, and how they can collaborate together to transform neighborhoods, anchor properties in communities which are underutilized, or overall economic development strategies through real estate innovation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**RE 5108. Affordable Housing Development and Finance. 3 Credit Hours.**

This course provides you with an overview of the multi-family rental housing segment within the real estate industry. Topics covered will include: market and demand analysis and their impact on product and product characteristics such as unit mix, size and amenities, construction, and development sequencing. How product influences design, construction, financing/capital stack, ownership structure. Also discussed will be regulations governing operations of low income housing, alternative financing and sources, and property operations. Students will perform individual and group case study assignments, and guest speakers will complement traditional lectures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**RE 5109. Institutional Investment Management. 3 Credit Hours.**

This course introduces students to the concepts and discipline of Real Estate Institutional Investment Management incorporating theory, practice and outcomes executed by Real Estate Investment Managers. The course focuses on sources of capital, investment strategy and risk, return expectations and measurement, manager due diligence, documentation, and regulatory oversight. Access to organizations, publications and research in the field is an integral part of this course offering. The past several decades has seen significant growth in the real estate investment management field including the offerings brought to market by real estate managers. This course intends to demonstrate how investment managers raise capital for real estate investment and how they oversee the vehicles in which investors participate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RE 5151. Real Estate Integrative Analysis. 3 Credit Hours.**

The Capstone is designed to provide students with an integrative experience in real estate finance that prepares them for entry into the workplace. To this end, business cases and a Capstone project reinforce and unify the tools that students have developed in prior classes through practical application and a full exploration of real finance as it is applied in investment scenarios. This class will involve detailed study of asset valuation and investment characteristics of commercial real estate using lecture, case study analysis techniques, Capstone project paper, and formal presentation. Topics covered will include acquisition and investment analysis, discounted cash flow analysis, enterprise asset optimization, financing, strategic disposition, risk mitigation, community revitalization, market analysis, and valuation techniques for commercial real estate. Class time will be spent reviewing key real estate valuation, finance, and development topics interspersed with selected group case studies that supplement the in-class discussions. Class time will also include student interaction, presentations, and team assignments. The focus of this course will be on critical thinking, utilization of the tools of real estate finance, and development of business communication skills. Each student should leave the class with an understanding of the issues faced by public and private real estate enterprises, governments, developers, the risks and decisions unique to real estate finance and investment, and the tools used to manage those risks and decisions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RE 5182. Independent Study. 1 to 3 Credit Hour.**

Special study in a particular aspect of real estate under the direct supervision of an appropriate graduate faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Recreational Therapy (RCTH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**RCTH 5001. Graduate Research I in Recreational Therapy. 3 Credit Hours.**

This course is designed as a graduate level introduction to research design, methods, and analyses. The course will focus on the fundamentals of health and social research, including: the logic of scientific inquiry, research ethics, developing testable research questions, data collection techniques, and basic data analysis. Students will also examine the diverse methods used in health and social research - including survey research, experimental design, single-subject design, and qualitative research - exploring both strengths and weaknesses of different designs. Students will address a single research question by integrating multi-disciplinary sources in a scholarly paper and by orally presenting the findings.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5009. Entrepreneurship in the Health Professions. 3 Credit Hours.**

This course is designed to introduce students to entrepreneurship. The goal of the course is to demonstrate the links between knowledge, experience and skills and commercial possibilities. The course integrates a number of different disciplines, ranging from sociology and psychology to economics, finance, marketing and human resource management. Through assigned readings, class discussions, activities and guest lectures from various professional fields, students will be challenged to apply theoretical principles, concepts and frameworks to real world situations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5102. Recreational Therapy: Now and Then. 3 Credit Hours.**

This course explores the historical roots of disability and the recreational therapy profession, as well as the current trajectory of the disability movement and recreational therapy practice. Concepts, models, approaches, and theories utilized in recreational therapy practice are reviewed, in which students are challenged to explain, apply, compare/contrast, and critique this information as it applies to current challenges, issues, and trends in practice and healthcare. The course additionally reviews and applies professional ethics and standards of practice to current healthcare situations; evaluates and reimagines scenarios for cultural competence and interprofessional collaboration; and hypothesizes potential approaches to current issues and trends for forward momentum of the profession, public health, and client outcomes. Students will review case studies that explore the application of the RT process (Assessment, Planning, Implementation, Evaluation, and Documentation) in different settings.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5201. Managing Dementia Care. 3 Credit Hours.**

Utilizing a person-centered and interdisciplinary approach, the course explores the strategies for assisting practitioners, agencies, families and caregivers with balancing the needs and behaviors of the individual with dementia, and the social and physical environments in which the person with dementia is placed. Students will apply fundamental principles for the design and evaluation of activity-based, psychosocial programs for this population. Models for managing problem behaviors while respecting the needs of the client will be explored. This course seeks to emphasize the importance of interdisciplinary support and is therefore, appropriate for students of healthcare disciplines that utilize an activity-based approach. NOTE: Prior courses in lifespan/human development and anatomy are suggested. Undergraduates may enroll with permission of instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5204. Recreational Therapy and Assistive Technology. 3 Credit Hours.**

This course provides an in depth review of the use of and opportunities for assistive technology in recreational therapy services in promoting the full inclusion and community participation of persons with disabilities. Emphasis is placed on the AT devices and services that promote functional independence and participation in the community and in physically and socially active recreation and leisure. Students will review the literature on the use of assistive technology and make practice recommendations for therapists working with individuals who may benefit from the use of assistive technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5205. Recreational Therapy in Geriatric Services. 3 Credit Hours.**

This course provides an in-depth review of the evidence for the use of recreational therapy in geriatric service settings. Emphasis is placed on developing best practices for recreational therapists to assess needs, develop interventions, and evaluate intervention outcomes. Students will (1) read and critique current literature related to RT practice in geriatric service settings; (2) synthesize the research findings and identify key elements that should be disseminated to recreational therapists within geriatric services settings; (3) develop knowledge translation plan; and (4) present findings to peers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5212. Play and Pediatric Development. 3 Credit Hours.**

This course explores the theoretical and practical dimensions of play and the dynamic relationship that exists between a child's play and ongoing development - from infancy through adolescence. Opportunities are provided to examine elements of play, benefits of play and various play modalities and the contribution to developmental tasks for typically and atypically developing children. Topics to be covered include the intersection of gender, race/ethnicity, disability, culture, community, media, and technology with play and development. Additional topics reviewed include assessing play behaviors, designing multipurpose play environments, selection and safety of play materials and apparatus and current efforts to reinvigorate the culture of play in the development of children.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5214. Child Life Interventions. 3 Credit Hours.**

This course examines Foundation of Child Life practice, including theories and methods used to reduce stress and increase child/family abilities to cope with illness and hospitalization. The course includes rationale and evidence for interventions related to techniques to prepare children for medical procedures, pain management, coping skills, family-centered care, and bereavement support. Students learn about credentialing requirements for Child Life Specialists and are encouraged to engage in field-based experiential learning. NOTE: Undergraduates may register for this course with permission of the instructor and must have completed course content in basic psychology and anatomy and physiology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5250. Special Topics in Recreational Therapy. 1 to 3 Credit Hour.**

Contemporary issues related to new methods and areas of RT practice, including, but not limited to assistive technology, RT in school settings, home health care, and community leisure programs for individuals with disabilities. Course topics will change. This course may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RCTH 5261. Disability Seminar on Developmental Disabilities and Mental Health Conditions. 3 Credit Hours.**

This course examines the prevalence, etiology, pathology, prognosis, characteristics, and complications of various mental health diagnoses and developmental disabilities across the lifespan. Common needs and issues of these health conditions related to recreational therapy's scope of practice in healthcare and human services are reviewed, specifically issues related to institutionalization, community-based services and inclusion, as well as others. Healthcare and human services trends and common evidence-based recreational therapy interventions are reviewed.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5271. Disability Seminar on Physical and Neurological Health Conditions. 3 Credit Hours.**

This course examines the prevalence, etiology, pathology, prognosis, characteristics, and complications of various physical and neurological health conditions across the lifespan. Common needs and issues of each health condition related to recreational therapy's scope of practice are reviewed, along with personal narratives of people living with the health condition to foster an understanding of the lived experience. Healthcare trends and common evidence-based recreational therapy interventions are reviewed, which students apply to case studies in preparation for clinical practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5301. Evidence Based Practice in Recreational Therapy I. 3 Credit Hours.**

This course will introduce students to evidence-based practice in recreational therapy (RT). Students will develop a critical understanding of how evidence is generated, retrieved, and appraised. They will become knowledgeable about the relevance of research findings for clinical decision-making in RT practice. Students will develop skills at synthesizing and presenting evidence to support or challenge current RT issues/practices for particular diagnostic groups or interventions.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5302. Evidence Based Practice in Recreational Therapy II. 3 Credit Hours.**

In this course, students will explore the practitioner-researcher role by building upon prior knowledge attained across the Recreational Therapy program. This course supports the use of research knowledge in making practice decisions that improve the delivery of recreational therapy interventions. It serves as a culminating course through which students demonstrate mastery of program competencies. Course assessments include a comprehensive exam and the development of an evidence-based protocol.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in RCTH 5301 and RCTH 5442.



**RCTH 5311. Conceptual and Contemporary Issues in Recreational Therapy. 3 Credit Hours.**

This course examines conceptual, theoretical, and practical issues associated with the organization and delivery of RT services. It uses a combination of readings and oral and written exercises through which students reflect on and develop informed positions on core values and beliefs that support the profession.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5312. Leisure, Health, and Recreational Therapy Interventions. 3 Credit Hours.**

In this course, students will explore the relationship of leisure to health and well-being and delve into the literature on specific recreational therapy modalities, interventions, and facilitation techniques. A focus on evidence-based practice will be applied by identifying therapy ingredients in the literature that promote change, using thoughtful clinical decision-making in the absence of evidence, and adapting or modifying based on client needs. Students will conduct an activity and task analysis, identify modalities to meet specific population needs, and increase awareness of modality resources.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5314. Leisure-time Physical Activity and Community Engagement in Recreational Therapy. 3 Credit Hours.**

This course provides an overview of the effects of physical activity and community participation on health among individuals with disabilities. All levels of physical activity (i.e., sedentary - vigorous) will be examined in relation to the impact on cognitive, physical, social, and emotional health. This class has a unique focus on utilizing the community as a resource to increase physical activity. Thus students will have the opportunity to assess barriers and facilitators to community-based physical activities in diverse populations, as well as exploring community specific resources. Particular attention will be given to organizational sponsorship of and different options for community-based activities for individuals with disabilities. Additionally, the class will critique interventions aimed at increasing LTPA for individuals with disabilities. Topics to be covered include: sedentary-vigorous physical activity, metabolic equivalency of leisure time activities, assessment of physical activity, and a critique of population specific intervention considerations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5315. Social Engagement and Community Participation in Recreational Therapy. 3 Credit Hours.**

This recreational therapy course explores the theoretical and practical dimensions of social systems and the dynamic relationship between the individual with disabilities and their community. The course will identify how individuals with disabilities interface with their social environments and the challenges that are experienced in the navigation process. Students will explore aspects of stigma that influence the openness of a community, and consider both the benefits and the challenges of segregation, integration and full inclusion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5316. Measuring Health and Disability: The ICF Model. 3 Credit Hours.**

The International Classification of Functioning, Disability, and Health is a worldwide biopsychosocial model of disability and coding system for the purpose of providing a scientific basis for understanding and studying health, establishing a common language for describing health, and comparing data across countries and disciplines. This course introduces students to the ICF model reviewing the model's development, aims, and application in current healthcare practice, as well as opportunities to expand its application in the pursuit of providing high-quality, transdisciplinary, and integrated research and care in clinical and non-clinical settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5382. Independent Study. 1 to 6 Credit Hour.**

This supervised project is structured between the student and a faculty mentor. Projects may include developing a research proposal, conducting a field-based investigation, or developing and evaluating a program. Registering for this course requires prior permission from a faculty mentor. A mutually agreeable study contract must be secured before the end of the second week of the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RCTH 5402. Recreational Therapy Administration and Management. 3 Credit Hours.**

This course examines program, personnel, fiscal, and facilities management, including professional standards of practice and accreditation standards that guide and regulate organization and delivery of Recreational Therapy services in health care and human services settings.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5442. Program Planning and Practice in Recreational Therapy. 3 Credit Hours.**

This course is designed to prepare students for the development of systematically designed recreational therapy service delivery programs. This course examines conceptual models used in the development of evidence-based recreational therapy programs. Students learn the processes for developing comprehensive program and specific program plans that are applied in a manner that provides efficient recreational therapy services to clients receiving services across community and non-community based settings.

**Repeatability:** This course may not be repeated for additional credits.

**RCTH 5787. Recreational Therapy Practicum. 1 to 3 Credit Hour.**

Field placement is made with emphasis on acquisition and application of practical skills for students who do not meet eligibility for NCTRC professional level certification examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

## Rehabilitation Medicine (RHMD)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**RHMD M144. Survey of Rehab Medicine. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**RHMD M300. Rehabilitation Medicine Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**RHMD M341. Principles of Brain Trauma Rehabilitation. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**RHMD M343. Career Exploration of General Physical Medicine and Rehabilitation. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**RHMD M740. General PM&R. 0 Credit Hours.**

**Course Attributes:** M2

**RHMD M741. Brain Trauma Rehabilitation. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**RHMD M742. Pediatric Rehabilitation Med. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**RHMD M745. Musculoskeletal Rehab Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

## Rehabilitation Sciences (REHB)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **REHB 5311. Leisure-time Physical Activity and Community Engagement in Persons with Disabilities. 3 Credit Hours.**

This course provides an overview of the effects of physical activity and community participation on health among individuals with disabilities. All levels of physical activity (i.e., sedentary - vigorous) will be examined in relation to the impact on cognitive, physical, social, and emotional health. This class has a unique focus on utilizing the community as a resource to increase physical activity. Thus students will have the opportunity to assess barriers and facilitators to community-based physical activities in diverse populations, as well as exploring community specific resources. Particular attention will be given to organizational sponsorship of and different options for community-based activities for individuals with disabilities. Additionally, the class will critique interventions aimed at increasing LTPA for individuals with disabilities. Topics to be covered include: sedentary-vigorous physical activity, metabolic equivalency of leisure time activities, assessment of physical activity, and a critique of population specific intervention considerations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **REHB 5312. Social Engagement and Community Participation for Persons with Disabilities. 3 Credit Hours.**

This blended course (i.e. on-line & classroom) explore the theoretical and practical dimensions of social systems and the dynamic relationship between the individual with disabilities and their community. The course will identify how individuals with disabilities interface with their social environments and the challenges that are experienced in the navigation process. Students will explore aspects of stigma that influence the openness of a community, and consider both the benefits and the challenges of segregation, integration and full inclusion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **REHB 5313. Measuring Health and Disability: The ICF Model. 3 Credit Hours.**

The International Classification of Functioning, Disability, and Health is a WORLDWIDE biopsychosocial disability model and coding system for the purpose of providing a scientific basis for understanding and studying health, establishing a common language for describing health, and comparing data across countries and disciplines. This course introduces students to the ICF model reviewing the model's development, aims, and application in current healthcare practice, as well as opportunities to expand its application in the pursuit of providing high-quality, transdisciplinary, and integrated research and care in clinical and non-clinical settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Religion (REL)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **REL 5000. Special Topics. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

### **REL 5001. Foundations in Philosophy of Religion. 3 Credit Hours.**

Considers a selection of classical and modern European and American philosophers and the implications of their views for religious thought. Some of those whose writings are considered may include Hume, Kant, Schleiermacher, Hegel, Kierkegaard, James, Whitehead, Rosenzweig, Gadamer, Ricoeur, Derrida, Irigaray, Habermas, and Foucault. Also may consider non-Western philosophies of religion, for example, those deriving from India or Japan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5002. Foundations in Religion and the Social Sciences. 3 Credit Hours.**

Introduces students to the discourse of Western social sciences on religion. Examines both modern and postmodern thinkers. Offers extensive readings in Durkheim, Marx and Weber. Then puts these modern theorists into conversation with postmodern critical theory as exemplified by Foucault and Bourdieu.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5003. Foundations in Textual and Historical Studies in Religion. 3 Credit Hours.**

Teaches the issues, methods, and trends emerging in the turbulent world of historical studies. Explores the problems, ideological constraints, and new venues that occur when "religion" is introduced to historical studies. Deals with New Historicism, Cultural Materialism, postcolonial theory, various feminisms, the crisis of narrative history, and various approaches now in vogue for reading ancient texts, 1st through 6th century CE and dealing with Greco-Roman religions, Judaism, and Christianity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5004. Foundations in Religion and Psychology. 3 Credit Hours.**

Introduces psychological theorizing about the origins, motivations, and aims of religion. Psychological thought will be contextualized, showing how it has been shaped by and in turn reshapes more traditional Western reflection on the nature of persons, symbols, and faith. Simultaneously, psychological perspectives assist Western people to appreciate, interpret, and adapt non-Western forms of religion and practices. In this course, we will read classic theorists, modern revisers, and some recent rethinking and responses to these theorists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5006. Foundations in Religion, Race, and Ethnicity. 3 Credit Hours.**

Critically engages leading theoretical discussions about the intersection of religion, race, and ethnicity. Serves also as a practicum in relevant social science methodologies and their application in the analysis of a chosen "ethnic" congregation in the Philadelphia area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5009. Foundations for the Critical Study of the Hebrew Bible. 3 Credit Hours.**

This seminar provides an introduction to the development and application of various critical methods employed in Hebrew Bible scholarship (sometimes called Old Testament scholarship). It will focus on methodological developments from the mid-nineteenth century CE through the present. Knowledge of Hebrew is not required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5101. Foundations in Hinduism. 3 Credit Hours.**

Both a historical and thematic survey of Hinduism. Attempts to make clear the structures of Hinduism and to explain its internal coherence as well as its apparent inconsistencies. While recognizing that it is impossible to include everything in the study of a religion which covers a time span of 5,000 years and which has existed over a vast geographical area, this course aims at giving comprehensive coverage of the history, traditions, rituals and theologies of Hinduism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5102. Foundations in Indian Buddhism. 3 Credit Hours.**

Examines the biographical data (not Buddhology) and philosophical themes in the Majjhima Nikaya and the Digha Nikaya. Studies philosophical themes in early Theravada traditions and selected suttas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5201. Foundations in Chinese Religions. 3 Credit Hours.**

Basic studies of (1) the classical texts and essential teachings of early Confucianism and Taoism, and (2) the ideological continuity from early Confucianism and Taoism to Neo-Confucianism and Neo-Taoism. Focuses on the major religious and philosophical traditions of China. Special consideration is given to the ethical, religious, and social thought of Confucianism and Daoism. Topics of discussion include: 1) the pre-Han concepts of spirits and gods, 2) classical Confucianism (the "Kung-Meng tradition"), 3) philosophical Daoism (the "Lao-Zhuang tradition"), 4) religious Daoism (including the popular cult of immortality), 5) ideological continuities and transformations in Neo-Confucianism and Neo-Daoism, and 6) religious practices in contemporary China. The approach is both historical and comparative. No knowledge of Chinese is required, as the readings are in translation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5202. Foundations in Chinese Buddhism. 3 Credit Hours.**

The course will provide an overview of Chinese Buddhism from its beginning in ca. 200 CE to the modern era. We will read primary sources in translation supplemented by overview lectures on history and philosophy. We will look at Chinese Buddhist thought, as well as its art and architecture, social dynamics and relationship with other traditions. A special section on modern and contemporary Chinese Buddhism will emphasize Buddhist reactions to modernity. Participants will create an annotated bibliography, do at least one presentation, and write a term paper (20+ pages).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5301. Foundations in Japanese Buddhism. 3 Credit Hours.**

Prepares students to do an in-depth study of Japanese Buddhism, covering several major Buddhist thinkers, such as Kukai, Dogen, Shinran, Myoe, Hakuin, Takuan, and Nishida. In order to understand how Japanese Buddhism accepted Indian and Chinese Mahayana Buddhism, the course traces some of the prominent conceptual frameworks of these two. The methodological orientation of the course is philosophical.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5401. Foundations in Judaism. 3 Credit Hours.**

This course offers students a critical introduction to issues within Jewish studies and the study of Jews, Judaism and Jewishness. Who are Jews and how have these designations shifted and changed over time? What is Judaism and how is it a religion? What role do texts and practices play in defining Judaism? The course asks these and other questions in order to both build on the legacy of how Judaism has been studied within the academic field of religious studies and to challenge some of these long held assumptions. In other words, the course both appreciates and challenges this scholarly legacy by offering students Religious studies, Jewish studies and literary critical tools to better appreciate Jewish texts and practices. And, by looking at Jews, Judaism and Jewishness in the plural, the course offers students a broad historical vision of Jewish culture. The course is organized, more or less, chronologically offering students a critical overview of Jewish history moving from the biblical period to the present with attention to specific Jewish texts and artifacts from specific periods and geographical locations within this history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5501. Foundations in Christianity. 3 Credit Hours.**

Focuses on both thought (doctrine, theology) and patterns of spiritual life, especially as revealed in Christian devotional "classics." What has been believed, taught and confessed by Christians since the Church's earliest era? How have individuals lived out these teachings, helped to reshape them, and discerned a spiritual life focused on God as known through Jesus Christ? As contemporary persons, how can we read and interrogate as well as appropriate these texts within a religious and cultural world so different from those of the authors? The continuing importance and vitality of these "classics" - or their rediscovery after long periods of obscurity - is part of the milieu for Christianity in its world context today.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5601. Foundations in Islam. 3 Credit Hours.**

Provides a basic survey of Islam for non-specialists. Includes a historical overview focusing on the relationship of Islam to the world and to other religions and ideologies of ancient, medieval, and modern times. Also considers the major modalities of Islam as a religion, including the legal, spiritual, philosophical, and social aspects. Finally, current issues in Islam will be considered, including modern changes in social organization and present-day politics. No prerequisites or language requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5701. Foundations in African Religions. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 5801. Foundations in Digital Humanities for the Study of Religion. 3 Credit Hours.**

"Foundations in Digital Humanities for the Study of Religion" will familiarize graduate students with methods and applications from the emerging field of DH. This course alerts students to the digital difference in three fields: text, space, and networks. It focuses on examples from the domain of religious studies, but the methods are applicable in other fields as well.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8001. Religious History of the United States in the 20th Century. 3 Credit Hours.**

Explores the scholarly literature on the history of religion in the United States in the 20th century. Focuses on members of New Religious Movements; on Muslims, Protestants, and Catholics; on race and ethnicity; on diasporas; on gender; and on changing concepts of the nature of "religion."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8002. American Religious History. 3 Credit Hours.**

Discusses and analyzes a selected topic in American religious history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8003. American Religious History II. 3 Credit Hours.**

Discusses and analyzes a selected topic in American religious history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8004. The History of Ethics. 3 Credit Hours.**

A general survey of the development of human ethics in history. While all of the most prominent religions and civilizations will be looked at, the course may concentrate more on some than others in accord with the expertise of the instructor, including especially contemporary themes in the study and application of ethical standards.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8005. Interreligious Dialogue. 3 Credit Hours.**

Investigates the theoretical issues that underlie all interreligious dialogue as well as examples of actual dialogue in progress, the latter partly according to student interest in those dialogues. The former will include analyses of what precisely is meant by dialogue and of the philosophical, theological, religious, psychological, "spirituality," and "praxis" aspects of interreligious dialogue, in other words, the presuppositions and implications of such dialogue.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8006. Methodological Options in the Study of Religion. 3 Credit Hours.**

Focuses on one of the currently available methodologies used in academic discourses on religion, enabling the students to evaluate this methodology and compare and contrast it with others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8007. The Body: East and West. 3 Credit Hours.**

This course assumes a comparative approach to investigate how we understand our body, how we live our body, and how our body changes through the practice of self-cultivation. It will first examine some of the traditional Western concepts of the body (e.g. Plato, Aristotle, Descartes, and Merleau-Ponty). Then it will turn to the study of the body as it has been articulated in the Eastern intellectual tradition (e.g. Samkhya Karika, Patanjali's Yogasutra, and Yuasa Yasuo's *The Body, Self-Cultivation and Ki-Energy*).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8008. Jung and the East. 3 Credit Hours.**

This comparative course delves into the similarities and differences between Jung's major theories developed after 1928 (e.g., archetypes, collective unconscious, synchronicity) and the representative Eastern theories of Taoist, Buddhist, and Kundalini Yoga traditions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8009. Religious Experience: Body and Meditation. 3 Credit Hours.**

This course examines the nature, the variety, the depths, and the meanings of religious experiences with the view to advancing a third alternative position to the two prominent contemporary philosophical positions which W. T. Stace and Steven Katz offered on this topic. As a preparation for this task, the course will first review some of the major classical texts, both Western and Eastern (e.g., Plotinus, Pseudo-Dionysius, St. Teresa, St. John of the Cross, Meister Eckhart, Early Buddhism, Kundalini Yoga, and Shintoism), so that the student will become familiar with the scope and the depth of the subject.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8010. Rel Exper-East & West. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 8011. Religion and Public Life. 3 Credit Hours.**

We will inquire about key intellectual issues pertaining to the public understanding of religion in the U.S. today: examining the ideas of secular and religious; understanding the first amendment clauses on religious freedom and establishment; tracking ethical debates concerning race, gender, and sexuality; gaining perspective on civil religion and popular culture; examining how religion uses and is portrayed in the media; and gaining insight about religious pluralism in local and global contexts. Additional goals include understanding the connections among world events, American society, and religious life. Students will do critical writing in a variety of styles to address public and academic audiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8012. Religion and Sexuality. 3 Credit Hours.**

This course examines recent ideas and trends in the scholarly literature about sexuality in the context of religious studies. We will focus primarily on how contemporary scholars have reshaped and rethought religious traditions that control and celebrate sexuality in light of contemporary ideas about the power and variety of sexual experience and expression. Students will be required to read and critically engage scholarly monographs and write an extensive original research paper on a topic of their choice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8100. Topics in Buddhist Thought. 3 Credit Hours.**

Various topics in the Buddhist thought of Japan, China, or India. May treat one, two, or all three of these traditions on a given topic and also compare them with parallel Western thought.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 8201. Chinese Philosophy and Religion. 3 Credit Hours.**

This course will introduce participants to a select few seminal works in the history of East Asian thought. These works will be read closely and in depth together with secondary scholarship on them. The primary readings will usually be from the pre-modern period and will focus on foundational works of Confucianism, Buddhism, and Daoism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8300. Topics in Japanese Buddhism. 3 Credit Hours.**

Provides an in-depth study of one or more topics in Japanese Buddhism. May cover any of the major Japanese Buddhist thinkers such as Kukai, Dogen, Shinran, Myoe, Hakuin, Takuan, and Nishida. Methodological orientation is philosophical.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 8301. Kyoto School of Philosophy. 3 Credit Hours.**

We will be reading for the course some of the major thinkers belonging to the Kyoto School, such as Nishida Keiji, Miki Kiyoshi, and Abe Masao. The thematic focus of the course falls on the understanding of the meaning of nothingness (both relative and absolute) from a philosophical as well as a depth-psychological viewpoint, while questioning the traditional formulation of ontology from an East Asian perspective.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8400. Topics in Biblical Studies. 3 Credit Hours.**

Research and discussion on a selected topic or topics in the biblical studies, including either the Hebrew Bible, the New Testament, or both, as well as a consideration of the relationship of that literature to other writings, including the apocryphal and pseudepigraphic.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 8401. Race, Gender, Class and Ethnicity in Ancient Near East. 3 Credit Hours.**

Against the background of the substantial work done in recent years in biblical racial and gender studies, this course explores the ancient Near Eastern, and specifically biblical, origins of diversity and religious nationalism in terms of race, gender, class, and ethnicity. The focus will be on how these apply to particular biblical texts that involve gender, ethnic, and class confrontations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8402. Violence in Ancient Religion: Pagan, Christian, and Jewish, 50 CE-500 CE. 3 Credit Hours.**

Explores examples of coercion, violence, and war resulting primarily from religious motivations within the political framework of the Roman Empire. The rubrics of violence in the cause of freedom, violence due to intolerance, and violence in the cause of ideology will organize the work. The questions of how religious ideas serve the cause of power and how the victims respond in each religion will dominate the seminar. In addition, discovering whether racial or ethnic biases skewed perceptions and inspired conflicts will be important throughout. In order to do this, we must look at the new studies of contemporary scholars who explore definitions of self-identity in antiquity. Who is a "Jew," a "Greek," a "Roman," and a "barbarian"? Finally, analyzing the range of acts, from ignorant prejudice to violence sanctioned by the state through legislation, will aid in the task of situating the phenomena in antiquity within the context of contemporary theories on the problem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8403. Holocaust and Representation. 3 Credit Hours.**

Building on works by Saul Friedlander, Sidra Ezrahi, James Young, and others, this course raises questions about what it means to represent and remember the Holocaust, focusing on issues of the aesthetic, memory, and the labor of representation. What do art, film, and literature enable in relation to legacies of communal destruction and trauma, and what do they foreclose? Other topics will include: the construction of historical narratives (whose stories? whose texts?), the art of fascism, nazi culture, and questions about the ongoing labor of memory, testimony, and artistic production.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**REL 8405. Women in Ancient Christianity. 3 Credit Hours.**

Explores the wide variety of women's participation in and experiences of early Christianity, from the first century to the fifth. Pays close attention to extent primary evidence and the varieties of ways that this body of evidence is used and interpreted in both theological and historical contexts. Hence the course will combine historical and hermeneutical issues in contemporary scholarship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8406. Feminist and Womanist Biblical Interpretation. 3 Credit Hours.**

This seminar provides a survey of the history and development of feminist and womanist biblical interpretation in the United States. It includes interpreters of the Hebrew Bible (sometimes called Old Testament) and New Testament in religious and non-religious contexts. Knowledge of Hebrew or Greek is not required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8501. Modern Catholicism. 3 Credit Hours.**

Focuses on reform movements within the Catholic Church from the 18th-century Enlightenment forward, concentrating particularly on the most recent times. These reform movements, climaxing in Vatican Council II (1962-1965), constitute a Copernican turn in Catholic history and involve at least five dimensions: 1) the turn toward the historical, 2) the turn toward the world, 3) the turn toward freedom/democracy, 4) the turn toward reform, and 5) the turn toward dialogue. Key thinkers include De Chardin, Küng, Schillebeeckx, Haring, and Ruether.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8502. Women in Ancient Christianity. 3 Credit Hours.**

Focuses on the four main figures of Christian tradition in the West: Augustine, Aquinas, Luther, and Calvin. Includes reading of original texts in English translation. Also includes modern works by Troeltsch and Weber.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8503. Issues in Theology. 3 Credit Hours.**

Deals with one or more issues in modern and/or contemporary religious theology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8504. Christology in the Ancient Church. 3 Credit Hours.**

Explores the emergent ambiguities with regard to the identity of Jesus Christ during the 2nd through the 4th centuries. In order to understand the common person's view of Christ, we shall read apocryphal acts, lives of saints, sayings of the desert mothers, sayings of the desert fathers, and martyrologies. In addition, we shall examine primary texts of authors known as the Fathers, such as Tertullian, Irenaeus of Lyon, Melito of Sardis, Origen, Eusebius, Basil of Caesarea, Macrina, Gregory of Nyssa, and Gregory of Nazianus. One of the goals is to understand the debates and differences with the context of institutional monastic and ecclesiastical growth.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8600. Topics in Islamic History. 3 Credit Hours.**

Offers one of several topics in classical Muslim history, including the life of the Prophet Muhammad, the early development of the political system and Muslim law, Muslim theories of history, and selected trends in modern Muslim history.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 8601. Islamic Jurisprudence. 3 Credit Hours.**

Examines the Muslim legal prescriptions regarding women and war, the two issues for which Islam is most attacked today both in academia and the media. It will consider both the classical law and recent developments. Special attention will be given to the question of flexibility versus rigidity in the law, as well as to the type of society envisioned by the proponents of different interpretations. Current trends and possible future outcomes will be considered. The changing status and role of the religious responsum or fatwa will be probed as well, leading to a discussion of the development of religious authority in Islam.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8602. Islamic Mysticism. 3 Credit Hours.**

Examines the sources, rise and development of Muslim spirituality. The ideal of life and worship in Islam will be studied as the framework for Muslim mysticism. Then the development of spiritual life and thought will be examined, and especially the contribution of noted individuals. Finally, Sufi orders and their role in the life of Muslim society will be considered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8603. Islam in Global Perspective. 3 Credit Hours.**

This course focuses on contemporary Islam in a global context. It will consider the development of Islamic networks and the emergence of transnational identities among Muslims from places like Africa, Asia, Europe, and the United States. West African Muslim migrants among other groups will be examined for how they respond to the political, economic, and cultural processes of globalization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8604. African American Islam. 3 Credit Hours.**

This graduate seminar is designed to introduce students to the growing scholarly literature on African American Islam. It will explore the intersection of race, religion, and ethnicity in light of the various ways African American Muslims negotiate their identities and religious practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8700. Topics in African Religions. 3 Credit Hours.**

Covers a selected topic or topics in the study of African religions, including some or all of the following: African traditional religions, new African religions, and forms of Christianity and other major religions as practiced and elaborated by Africans.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 8701. African Ideas of God. 3 Credit Hours.**

Introduces the conception of God in African traditional spirituality and the implications of such a "theology" on African understanding of humanity. Explores African creation myths, the names and attributes of God in African languages, what people expect from God, and what God expects from people. In doing this, we will address African ethics or the conception of good and evil among Africans. The relationship of African concepts of God with Islam and Christianity will also be discussed, including the beliefs of African practitioners of those religions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8702. Religions of the African Diaspora. 3 Credit Hours.**

Looks at the historical development of African-derived or African-inspired religions in the African diaspora. Particular emphasis will be placed on Candomble in Brazil, Vodou in Haiti, and Santeria in Cuba, as well as on communities practicing these and related religious traditions in the United States.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8703. Africana Philosophical Thought. 3 Credit Hours.**

Explores a variety of philosophical and metaphilosophical problems in recent African philosophy through an examination of the treatment of the concept of "invention" in the work of several influential philosophers and social theorists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8704. Foucault in Africana Thought. 3 Credit Hours.**

Examines the two classic phases of Foucault's thought, archaeological and genealogical, and explores the impact they have had on the construction of race, gender, sexual orientation, disciplinarity, secularization, and politics as configured in Africana thought. Includes close readings of Foucault and his impact on the thought of Africana thinkers such as V. Y. Mudimbe, Cornel West, Molefi Asante, Sylvia Wynter, Paget Henry, Joy James, and B. Anthony Bogues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**REL 8800. Special Topics in Religion. 3 Credit Hours.**

A series of special topics in the field of religion, including some of those taught by visiting faculty. Content will vary from semester to semester. Specifics will appear in department course description booklet each semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 8810. Special Topics in Religion. 3 Credit Hours.**

A series of special topics in the field of religion, including some of those taught by visiting faculty. Content will vary from semester to semester. Specifics will appear in department course description booklet each semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9087. Teaching Practicum in Religion Studies. 3 Credit Hours.**

This course is for students who are beginning to teach religious studies in a university setting and wish to think about and develop their teaching skills. The course will help teachers in constructing the syllabus, conducting class discussions, designing lectures, getting the most out of student evaluations, using office hours effectively, creating teaching portfolios, working as a teaching assistant, grading, and problem solving around student interactions. The class will involve classroom visits and peer critiques, practical exercises and discussion about problems as they arise, so students should enroll during a semester when they are actually engaged in teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9182. Individual Study. 1 Credit Hour.**

Individual study with a faculty member while in the coursework phase of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9282. Individual Study. 3 Credit Hours.**

Individual study with a faculty member while in the coursework phase of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9382. Individual Study. 3 Credit Hours.**

Individual study with a faculty member while in the coursework phase of the program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This course fulfills the continuous enrollment requirement after coursework completion while preparing for the Preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9996. Master's Thesis Research. 1 to 6 Credit Hour.**

Capstone MA course. Student explores a specific topic with his or her MA advisor and writes a thesis of approximately 50 pages. Registration each semester required until thesis approval.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Pre-Dissertation Research. After having passed the Preliminary exams, registration is appropriate for students working on the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**REL 9999. Dissertation Research. 1 to 6 Credit Hour.**

Registration required each semester after elevation to candidacy until completion and successful defense of the dissertation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Restorative Dentistry (RDNT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**RDNT 8001. Fundamentals of Prosthodontics. 7 Credit Hours.**

This course is divided into modules of the disciplines of prosthodontics, i.e., fixed, removable, complete dentures, implant dentistry, intraoral photography and occlusion. Modules are overviews of: Occlusion, Implant Dentistry, Removable Partial Dentures, Intraoral Photography, Complete Dentures, Fixed Partial Dentures, Prosthodontic Diagnosis and Treatment planning, and Digital data acquisition and manipulation.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**Repeatability:** This course may not be repeated for additional credits.

**RDNT 8002. Biomaterials. 2 Credit Hours.**

This course is a seminar series of 12 lectures for the PGY1 postgraduate prosthodontics students. A variety of topics relating to restorative materials used in prosthodontics is presented by the course director and the PG students. Each student is required to present at least one topic. The presentation must contain a full discussion of the important chemical, physical and clinical properties of materials chosen for the topic. A literature review of current research of the material, as well as a comparison of available products must also be presented.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**Repeatability:** This course may not be repeated for additional credits.

**RDNT 8003. Maxillofacial Prosthetics. 2 Credit Hours.**

This course will provide the prosthodontic resident with an understanding of maxillofacial prosthetics and dental oncology.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**Repeatability:** This course may not be repeated for additional credits.

**RDNT 8004. Integrated Medical Sciences. 2 Credit Hours.**

Temple faculty and invited guest lecturers administer modules within the overall course. The course has a series of lecture/seminars that address subjects that are ancillary to prosthodontics but which are important for the practice of prosthodontics and for which the residents must have an understanding.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**Repeatability:** This course may not be repeated for additional credits.

**RDNT 8005. Board Review Seminar. 2 Credit Hours.**

The format of this seminar is to review American Board of Prosthodontics released examinations. The questions are assigned to the residents who must find a reference to justify each of the answers. Approximately 750 questions are reviewed. This seminar provides a broad overview and review of didactic materials to be tested on the actual Board examination that all third year residents take. The questions are reviewed individually and the correct answers identified. The residents are assigned to the questions in a rotating cycle.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**Repeatability:** This course may be repeated for a total of 4 credit.

**RDNT 8011. Implant Literature Review Seminar. 1 Credit Hour.**

This seminar is a combined seminar of the oral-maxillofacial residents' periodontal, prosthodontic postgraduate students and specialty faculty. Each discipline is responsible for hosting the monthly seminar. The specific discipline selects the topic for discussion and selects the articles for review. This course is designed to review the current literature and most up-to-date techniques. Special emphasis is placed on critical examination of all the literature related to research design and validity of the conclusions.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**RDNT 8012. Current Literature Review Seminar I. 2 Credit Hours.**

Postgraduate students select articles after reviewing current periodicals, and are selected based on interest and application to prosthodontics practice. Articles may be selected from any peer-reviewed journal of relevance to prosthodontics.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**RDNT 8050. Advanced Prosthodontics Seminar. 2 Credit Hours.**

Invited guest lecturers and RSDM faculty present a variety of clinical topics for review. This course is designed to introduce the first year resident to basic concepts in five (5) areas of prosthodontics. Formal lectures are combined with seminar discussions of prosthodontics topics.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**Repeatability:** This course may be repeated for a total of 4 credit.

**RDNT 8183. Prosthodontics Literature Review Seminar. 5 Credit Hours.**

This course is designed to develop an in-depth knowledge of prosthodontics through primary classic and historical literature in Fixed Prosthodontics, Removable Partial Dentures and Complete Dentures, Implant Dentistry and Articulation and Occlusion. Specific topics are assigned for each seminar. Generally 10 articles will be reviewed during each seminar. Individual students will review and report on each article. The review will be a synopsis of each article identifying all pertinent points discussed. The student must determine the clinical significance of each article and how it affects their clinical practice. Assigned articles will be compared to citation in well-respected texts, adapted from recommendations by the American Board of Prosthodontics, and reviewed annually for revision.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**RDNT 8187. Prosthodontic Treatment Planning Seminar. 2 Credit Hours.**

This seminar is designed to develop the treatment planning/treatment sequencing acumen of the postgraduate students. The student is required to give a formal presentation in ABP format with mounted diagnostic casts. The students are exposed to incisive questioning from faculty and peers. Once per month, this clinical case conference is a combined case presentation with Periodontics, OMFS and Prosthodontics Implant patients. Patients are assigned in team concept to a surgical (resident-Perio-OMFS) and a prosthodontics postgraduate student. The various participants of different specialties will participate in the presentation and discuss viable treatment alternatives relative to each specialty. This is a combined participation seminar for identifying maximum predictability for success.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

**RDNT 9185. Advanced General Dentistry Clinic I. 1 to 12 Credit Hour.**

This course is the clinical component of the Advanced Education in General Dentistry (AEGD) Postdoctoral Program, a CODA-recognized advanced training program beyond a dental degree. Residents are assigned patients by the Director to provide vast experience in all disciplines of dentistry. Cases are assigned to fulfill the program requirements, to meet accreditation standards, and prepare the postdoctoral resident for independent general dental practice. A wealth of clinical information and learning is provided by faculty supervised patient treatment.

**RDNT 9285. Advanced General Dentistry Clinic II. 1 to 12 Credit Hour.**

This course is the clinical component of the Advanced Education in General Dentistry (AEGD) Postdoctoral Program, a CODA-recognized advanced training program beyond a dental degree. Residents are assigned patients by the Director to provide vast experience in all disciplines of dentistry. Cases are assigned to fulfill the program requirements, to meet accreditation standards, and prepare the postdoctoral resident for independent general dental practice. A wealth of clinical information and learning is provided by faculty supervised patient treatment.

**RDNT 9385. Clinical Prosthodontics. 12 Credit Hours.**

This is the clinical component of the Postgraduate Prosthodontics Program. Students are assigned patients by the Director, to provide vast experience in all disciplines of prosthodontics. Cases are assigned to fulfill the program requirements, to meet accreditation standards and prepare cases for the clinical portion of the American Board of Prosthodontics.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Prosthodontics.

## Risk Management and Insurance (RMI)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**RMI 5051. Managing Risk. 1 to 3 Credit Hour.**

Risk Management requires the firm to identify opportunities for gain and exposures to unexpected loss. The firm must then assess the potential consequences, and plan to finance the consequences of the adverse event if it happens. This course is designed to introduce the risk management process in the context of general corporate management. Each step in the process will be reviewed in detail, including setting the risk management context, identification of risk, measurement and analysis of potential impact, and appropriate treatment techniques. Risk financing options will be discussed in the context of global insurance and alternative capital markets. While the risk management process encompasses all types of risks, we will focus our identification discussion on the class of risks known as pure risk events; those that pose the threat of a loss if they happen, but no possibility of a gain.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 5101. Managing Human Capital Risk. 3 Credit Hours.**

The course introduces students to the major areas in non-pension employee benefits from the perspective of actuarial practice. It reviews the general considerations in employee benefit design including federal and state regulation, group insurance and the group insurance technique, sources of healthcare benefits, HMOs, PPOs, managed care systems and disability income benefits. The course also studies flexible benefits plans and funding considerations, and examines income tax implications and healthcare cost containment issues. In addition, students learn about group and individual life insurance theory and practice and their use in employee benefits plans.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (RMI 5301, RMI 5401, or RMI 5051)

**RMI 5102. Retirement Plans. 3 Credit Hours.**

Composed of two sections: 1) Reviews basic features and defined contribution approaches of retirement income. Examines sponsor objectives served by the creation of qualified retirement plans, tax and non-tax qualification requirements, and individual account retirement plans. Subjects: profit sharing plans, Section 401(k) and 403(b), employee stock ownership, cash balance, simplified employee pension, and executive retirement arrangements. 2) explores defined benefit plans and plan administration, fundamentals of pension plans with emphasis on the defined benefit approach to providing retirement income. Subjects: plan design, actuarial aspects (costs and funding), investment of plan assets, and plan termination insurance. Provides a basic foundation of retirement income.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 5103. Health Risks. 3 Credit Hours.**

Focuses on: 1) special characteristics of risk management in healthcare institutions/agencies; 2) health insurance issues (as benefit for patients and revenue source for providers); 3) health economics (macro) as related to above.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in HCM 5101.

**RMI 5104. Managing Property and Liability Risk. 3 Credit Hours.**

The course introduces students to the major areas in property and liability insurance from the perspective of actuarial practice. This is a highly participative and writing-intensive course that is designed to broaden perspectives on insurer operations and management of risk with a focus on the following areas: Enterprise Risk Management, Property & Casualty (P&C) Insurance Underwriting, Claims Management, Insurer Distribution Channels, Financial Performance Metrics and Ratings, Insurance Regulation, Reinsurance, Alternate Risk Transfer, Modeling Catastrophic Risk, and Innovation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (RMI 5301, RMI 5401, or RMI 5051)

**RMI 5105. Advanced Applications in Risk Management. 3 Credit Hours.**

Divided into five parts. 1) reviews statistical distributions common in insurance e.g., negative binomial, pareto, and log normal distributions and evaluates their ability to model long-tail losses. 2) considers inferences from insurance data, e.g., the fitting of theoretical distributions using the method of moments and maximum and credibility theory. 3) considers loss reserve runoffs and forecasting future. 4) applies portfolio theory (including correlation analysis) to show the relationship between firm value (net worth) and insurance purchases. 5) reviews discounted cash flow techniques to determine premiums and illustrate financial aspects of captive formation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 5106. Adv Risk Mgmt Models. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 5107. Risk Management, Governance and the Role of the Board. 3 Credit Hours.**

Large scale failures of firms such as Enron, WorldCom, Adelphia, and a long list of others are widely viewed as failures of corporate governance. These cases have drawn significant regulatory attention to the role of corporate governance in preventing or contributing to those failures. One outcome of this increasing scrutiny is the emergence of Enterprise Risk Management (ERM) as a framework for managing risk while maximizing shareholder value in today's complex environment. Board members and senior officers are facing increasing scrutiny of their ERM processes from ratings organizations, standards setting agencies, regulators, clients and investors. Each of these has expectations for the role that the Board of Directors plays in managing risk across the organization. This course will focus on the relationship between corporate governance and ERM, using case analysis and discussion of both US and international governance and ERM standards, and Directors' and Officers' liability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (RMI 5301, RMI 5401, or RMI 5051)

**RMI 5108. Managing International Risk. 3 Credit Hours.**

This course provides an in-depth examination of risk management and insurance from an international perspective. It considers enterprise risk management in a global economy with emphasis on multinational corporations. The course will extensively apply principles of risk management to case studies related to some of the most salient, current international risks including in the areas of political instability, cybersecurity, terrorism, and natural catastrophes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (RMI 5051, RMI 5101, RMI 5104, RMI 5301, or RMI 5401)

**RMI 5109. Operational and Strategic Risk Management. 3 Credit Hours.**

This course includes the study of both Strategic and Operational Risk Management. Operational Risk, broadly speaking, arises from the management of human capital, operational processes and systems including but not limited to other specialized functions such as managing information technology, physical security, supply chain, and environmental health and safety. This course will review and discuss these risks in detail. The curriculum includes the application of risk analysis frameworks and metrics; the development of common mitigation techniques, such as IT security, risk financing, business continuity planning and implementation; and, will examine the most common operational factors that give rise to risk that may cause firms to fail. This course will also review and discuss operational risk management case studies. Strategic Risk Management, according to the Risk and Insurance Management Society, is a business discipline that drives deliberation and action regarding uncertainties and untapped opportunities that affect an organization's strategy and execution. The strategic planning process results in the firm making significant investments to address stakeholder needs and drive long term growth. This begs the question: how can a firm set its overall appetite for risk, and evaluate competing strategic initiatives from a risk/reward perspective in the context of its existing portfolio of risks? The second half of the course will, therefore, explore the connections between strategy and enterprise risk management, including the concepts of risk capacity, risk appetite/tolerance, and risk profile. It will also look at the role of enterprise risk management in effective decision-making and governance from the perspective of a firm's board of directors. Finally, this course will explore several Strategic Risk Management cases including the exploration of how corporate boards address risks that can lead to stakeholder litigation and possible bankruptcy because of damage to reputation, failed mergers, and failure to innovate.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in (RMI 5301, RMI 5401, or RMI 5051)

**RMI 5170. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RMI 5182. Independent Study. 1 to 6 Credit Hour.**

Special study in a particular aspect of insurance and risk under the direct supervision of appropriate graduate faculty member. No more than six hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RMI 5190. Special Topics - Risk Management and Insurance. 1 to 6 Credit Hour.**

Special topics in risk management and insurance.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RMI 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RMI 5801. Enterprise Risk Management. 3 Credit Hours.**

This course is designed to introduce the risk management process in the context of general corporate management. Each step in the process will be reviewed in detail, including setting the risk management context, identification of risk, measurement and analysis of potential impact, and appropriate treatment techniques. Risk financing options will be discussed in the context of global insurance and alternative capital markets.

**Level Registration Restrictions:** May not be enrolled in one of the following Levels: Undergraduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RMI 5890. Special Topics - RMI. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**RMI 9001. Corporate Risk Management. 3 Credit Hours.**

This course examines how corporations, especially financial firms such as banks and insurance companies, manage the risk and uncertainty that is inherent in their businesses. In particular, this course aims to move students to the frontier of academic research on corporations in the Risk Management and Insurance field. In addition to presenting canonical theoretical work, this course also draws from recently published, empirical academic research from the top academic journals in RMI, Corporate Finance, Accounting, and Economics. As a result, it also emphasizes current applied methods and data. NOTE: Students who have completed RMI 9001 with the title "Seminar-Property and Liability Insurance Markets" should not register for RMI 9001 with the title "Corporate Risk Management" as they are the same course and students will not receive credit for taking RMI 9001 more than once.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 9002. Household Finance and Risk Management. 3 Credit Hours.**

This course examines individual and household financial management under risk and uncertainty. Many household decisions are exposed to risk and this course provides an overview including household management of property, labor, health, and longevity risks. The course draws from recently published, empirical academic research. As a result, it also emphasizes current applied methods used to infer causal relationships. NOTE: Students who have completed RMI 9002 with the title "Seminar-Life Insurance and Employee Benefits" should not register for RMI 9002 with the title "Household Finance and Risk Management" as they are the same course and students will not receive credit for taking RMI 9002 more than once.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 9003. Theory of Risk and Uncertainty. 3 Credit Hours.**

This course aims to move students to the frontier of academic research on consumer decision theory under risk and uncertainty. In addition to presenting canonical theoretical work based on the expected utility framework, this course also incorporates psychological and behavioral evidence into economics. As a result, students will be exposed to modern utility frameworks and the experimental methods used to test them. NOTE: Students who have completed RMI 9003 with the title "Seminar in Risk Theory" should not register for RMI 9003 with the title "Theory of Risk and Uncertainty" as they are the same course and students will not receive credit for taking RMI 9003 more than once.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 9004. Healthcare Finance and Insurance. 3 Credit Hours.**

This seminar provides a set of technical skills and knowledge base for the analysis of healthcare financing in different countries. It is designed to be of use to those working: in Ministries of Health, Ministries of Finance, or private insurance companies around the globe; in the economics and marketing departments of international pharmaceutical companies; or on the staff of international agencies. There will be a series of short assignments, two papers, and an exam. It is anticipated that some students will use the assignments as a starting point for their dissertation proposals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 9005. Law and Economics of Liability Markets. 3 Credit Hours.**

This seminar will cover the theoretical and empirical literature of the law and economics of liability. Insurance and tort (and their interaction) are the two major compensations systems and will be a focal part of the class, but others such as administrative compensation funds will be discussed. The first half of the class will focus on the economic theory underlying liability and liability financing. The second half of the class will focus on empirical studies of the law and economics of various markets and public policy responses to liability issues.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may not be repeated for additional credits.

**RMI 9090. Spec Topic Risk Mgt. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**RMI 9183. Directed Study-Risk Mgt. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## School of Dentistry (DENT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **DENT D001. 1st Yr Dental Sch Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D002. 2nd Yr Dental Sch Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D003. 3rd Yr Dental Sch Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D004. 4th Yr Dental Sch Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D100. Biochemistry. 4 Credit Hours.**

The goal of Biochemistry is to permit students to understand human biochemistry in health and disease. The student must become familiar with the basic biochemical pathways and the structures of important metabolites since this basic information underlies discussions of biochemical regulation throughout the course. Some emphasis is given to nutritional concerns in dental disease and treatment.

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D101. General and Oral Histology. 4 Credit Hours.**

The dental histology course will be taught in the following sequence. First you should read the textbook prior to coming to laboratory. The next part of the sequence is the laboratory. The laboratory portion of the course is taught in Lecture Room A. The histology laboratory is also on Canvas. The Canvas site contains the Laboratory, which is a series of exercises with text and pictures that we will go through during each laboratory session. Students will work in groups and will go through the Lab under the guidance of the laboratory instructor. The instructor will project the images and if students have laptop computers they can bring them into lab to facilitate the learning process. Otherwise you should bring in a copy of the images for the lab and you will label these images in class. The laboratory is the place where we will be discussing the basic structure of cells, tissues and organs. The next part of course is the lecture. During the lecture the lecturer will be building upon the material that was learned in laboratory and add the functional and cell biological information that you need to know.

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D108. Science in Dental Practice I. 1 Credit Hour.**

Students receive face to face and online instruction in the scientific method of inquiry and research methodology including how research is conducted, evaluated and applied to patient care. The practicum component of the course requires that each student attend and participate in four annual Scholarly Activity and Research (SAR) Days during the four years of dental education.

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D120. The Practice and Profession of Dentistry. 2 Credit Hours.**

The primary goal of the Practice and Profession of Dentistry course is to introduce the new dental student to the many aspects of the profession. Upon entrance into the clinic, the student will be expected to not only apply the knowledge and skills obtained during the first two years of their education, but also to manage an entire host of other factors. This course, which is divided into learning modules, will introduce the new professional student to the topics of ethics and professionalism as a student and a practitioner; legal and regulatory aspects of dentistry; the dental team; and practice management.

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D131. Behavioral Sciences. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

### **DENT D139. DPH I: Cariology, EBD and Principles of Prevention. 1 Credit Hour.**

The Dental Public Health I course is designed to provide foundation knowledge and experiences on the important role that dentists play in promoting health not only for their patients but also in the communities where they work. Temple University Kornberg School of Dentistry has had a long history of community service and engagement with different population groups. In this course you will learn in lectures, discussions and exercises the foundation knowledge of evidence-based practice to promote oral health among your patients and the community where you will practice.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D150. Dental Materials I. 1 Credit Hour.**

This course presents the basic science foundation for understanding the behavior and evaluation of dental materials, specific properties for dental materials presented in the course, and practical properties of these materials for application clinically. The course includes thirteen lectures, four of which are focused on properties of materials and nine on specific dental materials. A required group project involves creating an online wiki site through Blackboard involving critical thinking and evidence-based evaluation of dental materials.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D161. Restorative Dentistry I for Advanced Standing. 4 Credit Hours.**

The goal of the summer session course D161, Restorative Dentistry I for Advanced Standing, is to prepare the advanced standing student to integrate into the sophomore class of the traditional dental curriculum in the fall semester. Pre-requisite subjects and skills for future classes are covered, which will orient the advanced standing student to instrumentation, materials, and procedures used in RDIII and RDIV. Student's previous knowledge in dental anatomy and occlusion will be assessed. Normal TMJ anatomy is considered in relationship to centric relation and maximum intercuspation. The different possible occlusal schemes in static and dynamic occlusion are studied. Students learn the principles and application of the dental articulator and face bow. The subjects of cariology and caries risk assessment are introduced and the ICDAS system of caries classification is reviewed. Students learn the principles of tooth preparation that contribute to resistance, retention, and convenience form and practice the application of these principles in the preparation of direct composite and amalgam restorations, as well as crown and fixed partial dentures.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D162. Restorative Dentistry I - Lecture. 2 Credit Hours.**

Course D162 is designed to provide foundation knowledge and experiences of the anatomy of the primary and permanent dentitions and the surrounding structures. In addition, it is expected that the student will learn occlusion and the anatomy of the temporomandibular joint through lectures.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D163. Restorative Dentistry I - Lab. 2 Credit Hours.**

The laboratory course D163 is designed to learn and develop hand skills to restore typodont teeth to proper shape and function using wax. The course will provide foundation knowledge and experiences of the anatomy of the primary and permanent dentitions and the surrounding structures. In addition, students will learn occlusion and the anatomy of the temporomandibular joint through laboratory preclinical sessions.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D164. Projects in Restorative Dentistry Advanced Standing. 8 Credit Hours.**

This is a combined lecture and laboratory course, which prepares the advanced standing student to enter the Restorative Dentistry curriculum. The focus is on laboratory skills essential to the fabrication of custom trays, primary and secondary models, articulation, waxing, and casting of a gold crown. Additional exercises in tooth preparation and provisionalization are included. Information is distributed by use of assignments in textbook, laboratory manual, hand out, and lectures.

**Repeatability:** This course may be repeated for additional credit.

**DENT D200. Inflammation, Infection and Wound Healing. 3 Credit Hours.**

The course provides the foundation knowledge (physiology, microbiology, immunology and pathology) necessary for clinical decision making related to the conditions of inflammation, infection and wound healing. Emphasis is on the oral and maxillofacial complex and the dental management of patients with these conditions, including pharmacologic therapies.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D202. Gross Anatomy. 6 Credit Hours.**

The subject matter for Dental Gross Anatomy has been divided into three units: Unit I - Back, Spinal Cord, Posterior Triangle of the Neck, and Upper Extremity; Unit II - Head and Neck; Unit III - Thorax and Abdomen. The pelvic-perineal regions and lower extremity will not be studied. You are responsible for knowing all material you are directed to study in the "Dental Gross Anatomy Course Dissection Guide" and all material presented in the Conferences and Lectures.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D203. Neuroanatomy. 2 Credit Hours.**

Neuroanatomy for the undergraduate dental student provides a foundation of fundamental knowledge from which the student may develop an appreciation of the nervous system in both health and disease. The student will acquire a general understanding of structure and function of the nervous system that will be neither exhaustive in scope nor superficial in approach.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D204. The Nervous System and Pain. 3 Credit Hours.**

The course provides the foundation knowledge (physiology, microbiology, immunology and pathology) necessary for clinical decision making related to the normal and abnormal function of the nervous system. Emphasis is on the oral and maxillofacial complex, physical diagnosis and dental management of patients with pain and pathologic conditions of the nervous system, including pharmacologic therapies.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D210. Postnatal Craniofacial Growth and Cephalometrics. 2 Credit Hours.**

Postnatal Craniofacial Growth & Cephalometrics is a lecture series which includes one workshop and one problem based learning experience. Objectives of the course are to introduce the predoctoral student to the processes of normal craniofacial growth and development in order to recognize and identify deviations from normal.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D211. Behavioral Science I. 1 Credit Hour.**

This course is provided in the freshman year of the DMD program. The course consists of classroom lecture and discussion. It is the first course in a two-course sequence designed to introduce students to the importance of behavioral science as it relates to dentistry.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D250. Dental Materials II. 1 Credit Hour.**

The overall goal of this course is for the freshman dental student to continue to attain dental biomaterials competency through the development and application of foundation knowledge in materials science and in specific dental materials (gypsum materials for investments and die stones, high temperature investment materials, hydrocolloid/alginate and elastomeric impression materials, casting alloys, casting procedures, soldering materials and procedures, porcelain and ceramic materials, ceramic-metal systems, cements and luting materials, polymer and denture base resins, and dental implants/tissue engineering materials) necessary for completing the preclinical, clinical and laboratory phases of the dental curriculum. This didactic material also involves attainment of a working knowledge of these dental materials including their selection, use and limitations.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D251. Dental Materials I & II. 2 Credit Hours.**

This two credit course presents the basic science foundation for understanding the behavior and evaluation of dental materials, specific properties for dental materials presented in the course, and practical properties of these materials for application clinically. This blended course includes assigned readings, online asynchronous PowerPoint presentations, selected online class capture lecture presentations, and completion and review of assigned study questions. Three current materials-oriented journal articles are assigned. Two live class sessions are conducted, one at the beginning of the course for orientation and initial presentations, and one toward the end of the course for seminar-style discussion and review of assigned materials. Assessment is by an in-class written multiple short essay examination based on study questions. Grading is Pass/Fail. Required text is: von Fraunhofer A. Dental Materials at a Glance. Wiley-Blackwell. Ames, Iowa. 2010. ISBN 978-0-8138-1614-2.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D252. Advanced Standing Behavioral Science I. 1 Credit Hour.**

Behavioral Science I blended learning course consists of classroom lecture and discussion. It is the first course in a two-course sequence designed to introduce students to the importance of behavioral science as it relates to dentistry.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D253. Advanced Standing Periodontology. 1 Credit Hour.**

Periodontology is a blended learning lecture series examining the structural biology of the periodontium in health and disease, with consideration of clinical, histologic, biochemical, microbiologic and immunologic features and risk factors. An overview examination of plaque-related periodontal diseases as specific microbial infections in susceptible human hosts is provided, with emphasis on gingivitis.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D254. Advanced Standing Dental Public Health. 1 Credit Hour.**

The Dental Public Health blended learning course is designed to provide foundation knowledge and experiences on the important role that dentists play in promoting health not only for their patients but also in the communities where they work. Temple University Kornberg School of Dentistry has had a long history of community service and engagement with different population groups. In this course you will learn in lectures, discussions and exercises the foundation knowledge of evidence-based practice to promote oral health among your patients and the community where you will practice. This course will cover three areas: 1) Foundation knowledge for the field of community oral health and dental practice, 2) Principles of oral health promotion, and 3) Prevention of dental caries.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D255. Advanced Standing Restorative Dentistry I Projects. 8 Credit Hours.**

Projects in Restorative Dentistry for Advanced Standing students is a combined lecture and laboratory course, which prepares the student to enter the Restorative Dentistry curriculum. The focus is on laboratory skills essential to fabrication of custom trays, primary and secondary models, articulation, waxing and casting of a gold crown. Additional exercises in tooth preparation and provisionalization are included. Information is distributed by use of assignments in textbook, laboratory manual, hand out and lectures.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D261. Restorative Dentistry II for Advanced Standing. 4 Credit Hours.**

The goal of the fall semester course D261, Restorative Dentistry II for Advanced Standing, is to review and update the basic concepts required for restorative procedures utilizing dental amalgam and composite resin, in preventive procedures, minimally invasive restorations, conservative and conventional preparations, veneers, and foundations for full coverage crowns. Students apply the principles of caries removal and tooth preparation that contribute to resistance, retention, and convenience form. Students practice the application of these principles in the preparation of direct composite and amalgam restorations, as well as foundations for crowns and fixed partial dentures. Students will be afforded the opportunity to learn and demonstrate knowledge and technical skills required for academic advancement and patient treatment.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D262. Restorative Dentistry II Lecture. 4 Credit Hours.**

The primary goal of Restorative Dentistry II Courses D262 and D263 is to introduce basic concepts required for restorative procedures utilizing dental amalgam, composite resin, and full coverage cast restorations. Special emphasis will be placed on cavity preparation design and correct manipulation of dental materials. Students will be afforded the opportunity to learn and demonstrate knowledge and technical skills required for academic advancement and patient treatment. Course material will be presented in lectures, reading assignments, demonstrations, and laboratory exercises. To use time efficiently and for laboratory projects to be meaningful learning experiences, it is necessary that you complete the reading assignments prior to the session in which the information is utilized.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D263. Restorative Dentistry II Lab. 4 Credit Hours.**

The primary goal of Restorative Dentistry II Courses D262 and D263 is to introduce basic concepts required for restorative procedures utilizing dental amalgam, composite resin, and full coverage cast restorations. Special emphasis will be placed on cavity preparation design and correct manipulation of dental materials. Students will be afforded the opportunity to learn and demonstrate knowledge and technical skills required for academic advancement and patient treatment. Course material will be presented in lectures, reading assignments, demonstrations, and laboratory exercises. To use time efficiently and for laboratory projects to be meaningful learning experiences, it is necessary that you complete the reading assignments prior to the session in which the information is utilized.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D267. Oral Radiology. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D300. Human Systems and Disease I. 5 Credit Hours.**

The course provides the foundation knowledge (physiology, microbiology, immunology, pathology and pharmacology) necessary for clinical decision making related to the normal and abnormal function of the cardiovascular, respiratory and renal systems. Emphasis is on dental management and history taking for patients with diseases of these systems. The physical examination techniques commonly used in dentistry that relate to the cardiovascular and respiratory systems are taught and practiced.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D301. Human Systems and Disease II. 5 Credit Hours.**

The course provides the foundation knowledge (physiology, microbiology, immunology, pathology and pharmacology) necessary for clinical decision making related to the normal and abnormal function of the endocrine-reproductive, gastrointestinal, hematologic and musculoskeletal systems. Emphasis is on dental management and history taking for patients with diseases of these systems.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D339. Oral Surgery I. 1 Credit Hour.**

This course concentrates on fundamentals of Oral and Maxillofacial Surgery.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D350. Dental Materials II. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D360. Restorative Dentistry III Lecture. 4 Credit Hours.**

The Restorative Dentistry III (D360) lecture course is a continuation and further development of the material presented in freshman year Restorative Dentistry I & II. This course is closely integrated with the laboratory course (D361), both being designed to introduce fundamental concepts required for restorative dentistry procedures utilizing metal-ceramic and all-ceramic crowns, porcelain laminate veneers, fixed partial dentures, cast gold onlays, restoration of endodontically treated teeth and single tooth implants. Emphasis will be placed on principles of tooth preparation and fabricating provisional and permanent restorations along with correct manipulation of dental materials related to these restorations, providing integration of clinical and basic sciences. Problem solving, critical thinking, metacognitive and self-directed learning skills are incorporated.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D361. Restorative Dentistry III Lab. 4 Credit Hours.**

The Restorative Dentistry III (D361) laboratory course is a continuation and further development of the material presented in freshman year Restorative Dentistry I & II. This course is closely integrated with the lecture course (D360), both being designed to introduce fundamental concepts required for restorative dentistry procedures utilizing metal-ceramic crowns, porcelain laminate veneers, fixed partial dentures, cast gold onlays, restoration of endodontically treated teeth and single tooth implants. Emphasis will be placed on principles of tooth preparation and fabricating provisional and permanent restorations along with correct manipulation of dental materials related to these restorations, providing integration of clinical and basic sciences. Problem solving, critical thinking, metacognitive and self-directed learning skills are incorporated.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D373. Principles of Periodontology I. 2 Credit Hours.**

Principles of Periodontology I (DENT D373) is a lecture series that examines the structural biology of the periodontium in health and disease, with consideration of clinical and histologic features. This course also discusses the local, behavioral, and systemic etiological and predisposing factors of periodontal diseases, and the impact of periodontal infection on systemic health. The second half of the course includes the methods used in clinical and radiographic evaluation of the patient's periodontal health, periodontal risk assessment and prognosis, and development of a treatment plan of the diagnosed periodontal disease. Periodontal treatment of medically compromised patients and the management of periodontal emergencies will also be covered.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D401. Dental Ethics and Jurisprudence. 1 Credit Hour.**

Lectures and case presentations provide information about relevant areas of the law, including: contracts, employment issues, malpractice, risk management, informed consent, recordkeeping, and legal obligations. Students are instructed on the scope of practice, prescription writing limitations, Drug Enforcement Agency issues, and the impact of federal, state and local laws on the dental profession.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D402. DPH II - Health Promotion in Populations. 1 Credit Hour.**

This course provides an introduction to the public health and dental public health principles, practices, and achievements. The oral health status and the needs of the U.S. population across the lifespan, including underserved populations are discussed. Students are introduced to the dental health care delivery systems in the U.S. and various factors influencing these systems. This course provides the student the basic understanding of oral health policies, how they are developed and implemented. Dental professions' role in advocating for optimal oral health will be discussed. An overview of the definition of health literacy, how health literacy and oral health literacy are measured, and the role of oral health literacy in promoting oral health and accessing dental care in both private practice and in public health settings will be elaborated.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D403. Advanced Restorative Dentistry Lecture and Lab. 3 Credit Hours.**

Advanced technique in Restorative Dentistry, including those related to replacement of missing teeth, CAD/CAM technology and other advances in modern dental care.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D408. Oral Pathology I. 3 Credit Hours.**

diseases and developmental abnormalities that commonly affect the oral and maxillofacial complex. When appropriate, the radiographic and histologic features of pathologic processes are discussed. Students are taught to formulate appropriate clinical differential diagnoses for soft tissue abnormalities of the oral and perioral region. Students receive instruction in the management of patients with common oral mucosal diseases. Indications for patient referral to medical or dental specialists for diagnostic evaluation or disease management are presented. When applicable, information related to basic and clinical sciences will be discussed. Integration of the principles learned in clinical sciences and basic sciences (general and systems pathology, histology, embryology, etc.) will be addressed as applicable. Critical thinking is emphasized in case-based small group modules.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D420. Intro Clinical Dentistry. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D421. Treatment Planning. 2 Credit Hours.**

The sophomore course in Treatment Planning is designed to impart a foundation level of knowledge required in creating fully functional dental records, collecting and evaluating all pertinent medical and dental findings for the establishment of proper diagnosis, and the development of a sequential treatment plan in accordance with comprehensive general dental practice care.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D422. Medical Emergencies. 1 Credit Hour.**

This course presents medical emergencies that may arise during routine dental care and how to treat them.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D442. Pre-Clinical Radiography. 2 Credit Hours.**

The fundamentals of periapical, bitewing, and occlusal radiographic techniques are presented in a pre-clinical laboratory model.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D452. Endodontology Lecture. 2 Credit Hours.**

The Preclinical Endodontology lecture series encompasses the biology of the dental pulp and the management of pulpal and periapical pathological conditions using evidence based presentations. The pulp and periapical tissues are examined from the healthy state through the progression of inflammation and infection. Symptomatology and endodontic differential diagnosis through the use of communication with the patient, clinical examination, etiology determination, diagnostic testing and radiology are discussed. Variations of tooth and pulpal anatomy are examined. The rationales for the need of Endodontic therapy are considered from a biologic viewpoint. Patient management and the importance of informed consent are also discussed. The materials and methods of endodontic procedures are discussed including instruments, medicaments, pretreatment, access preparation, instrumentation, obturation and post-treatment techniques. Aspects of pediatric endodontics and endodontic emergencies are examined including management of cases which include the psychological aspects of pain. Case selection is appraised as it relates to associated systemic and local conditions including errors which could occur through treatment. Students are encouraged to use critical thinking throughout the course through class interaction such as small group sessions, discussion and in-class assignments.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D453. Endodontology Laboratory. 1 Credit Hour.**

This is a preclinical technique course in which each student will perform various nonsurgical endodontic techniques on a series of extracted human teeth. The techniques will be taught with the aid of lectures, tapes, assigned reading in textbooks and demonstrations. Supervision will be by the staff of the Advanced Education and Predoctoral Divisions of the Department of Endodontology.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D456. Restorative Dentistry IV Lecture. 3 Credit Hours.**

Complete and removable partial denture prosthodontics - lecture phase.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D457. Restorative Dentistry IV Lab. 3 Credit Hours.**

To provide the student with a basic understanding of biomechanical principles and technical skills required in the restoration of the complete and partially edentulous patient.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D465. Oral Radiology. 1 Credit Hour.**

The fundamentals of the production and interaction of x rays are presented in lecture form. This is followed by the production of the radiograph (physics, chemistry and technique), special imaging techniques (digital dental radiography, CT, CBCT, MRI), selection criteria, quality assurance, basics of radiation biology and radiation protection.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D466. Pediatric Dentistry Lecture and Laboratory. 3 Credit Hours.**

Pediatric Dentistry is an age-defined specialty that provides both primary and specialty comprehensive preventive and therapeutic care for infants and children through adolescence, including those with special health care needs. Pediatric Dentistry (D466) will build on aspects of restorative, endodontic, orthodontic and surgical principles so that diagnosis and treatment can be tailored to the primary and young permanent dentitions. This lecture and lab series is designed to prepare the undergraduate dental student for the clinical experience of treating children and adolescents in the Pediatric Dental Clinic and in a general practice setting.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D473. Principles of Periodontology II. 2 Credit Hours.**

Principles of Periodontology II (D473) is a lecture and lab series examining plaque control techniques, manual periodontal instrumentation, sonic and ultrasonic periodontal instrumentation, periodontal re-evaluation, phase II and supportive periodontal therapy, use of local and systemic antimicrobial agents in periodontal therapy, use of host modulation agents in periodontal therapy, and use of adjunctive diagnostic aids in periodontics.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D478. Local Anesthesia and Pain Control. 1 Credit Hour.**

To familiarize students with the full scope of pain control and management of the anxious patient using lectures and clinical laboratories to administer and receive injections and nitrous oxide sedation.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D491. Clinical Caries Management Throughout Life: A Pragmatic Course. 2 Credit Hours.**

This clinical application course will introduce the steps in caries management from detection and classification of caries lesions using clinical, radiological, and transillumination, risk assessment of behavioral, dietary, and medical conditions, risk classification, diagnosis, and developing and executing a care plan (treatment plan) for in-office and at home care.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D505. Temporomandibular Disorders (TMD) and Oral Medicine. 1 Credit Hour.**

Students will study temporomandibular disorders (TMD) of the craniofacial muscles, temporomandibular joints, masticatory system, nervous system and facial pain. Students will also study the dental management considerations of patients with systemic diseases that impact the oral condition, including but not limited to patients undergoing or with a history of head and neck cancer treatment. The acute and long-term impact of cancer therapies (especially head and neck radiation) on the various systems of the head and neck, including the oral cavity, will be studied. An emphasis will be placed on the role of the general dentist in the diagnosis and management of TMD, and medically complex patients with dental needs. Course information is routinely updated to ensure emerging information and current best evidence is integrated into the course.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D506. Oral Pathology II. 3 Credit Hours.**

Students receive instruction regarding the etiology, clinical features, histopathology, pathogenesis, treatment, and prognosis of diseases and developmental abnormalities that commonly affect the oral and maxillofacial complex. When appropriate, the radiographic features of pathologic processes are discussed. Students are taught to formulate appropriate clinical and radiographic differential diagnoses for soft and hard tissue abnormalities of the oral and perioral region. Indications for patient referral to medical or dental specialists for diagnostic evaluation or disease management are presented. Critical thinking is emphasized in case-based modules. Blackboard will be used as an adjunct teaching tool for instruction (subject material and images) and posting of grades. Case based clinical pathologic correlation (CPC) sessions will be held during the course at the end of each differential diagnosis section.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D510. Basic Interdisciplinary Implant. 2 Credit Hours.**

Basic Interdisciplinary Implantology is a lecture and laboratory series. This course will provide an introduction to historical and technologic development of present day dental implants. It will examine the implant-bone interface and the concept of osseointegration, along with discussion on the biomechanical consideration directed at both the dental implant and prosthesis. A review of the process for the formulation of a preoperative patient evaluation, pre surgical preparation, and comprehensive implant treatment planning will be reviewed. This will include treatment options discussed based on prosthetic need and surgical techniques. This course will also incorporate impression taking, fabrication of a surgical stent, and implant placement. Insights into potential complications, advanced surgical procedures related to dental implants, and preventative maintenance protocol will also be presented in the lectures.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D552. Endodontology. 1 Credit Hour.**

Endodontology (D552) is a lecture series designed to offer the student fundamental knowledge in endodontics making emphasis in its clinical application. With a biological perspective, topics such as traumatic injuries of the tooth, endodontic surgery, as well as relationship between endodontics and other dental and medical disciplines is discussed, helping the student to make a smooth transition to the endodontic clinic.

**Repeatability:** This course may not be repeated for additional credits.



**DENT D553. Restorative Dentistry V. 2 Credit Hours.**

This course is designed to build on DENT D421 (Treatment Planning) providing a further and more detailed knowledge of comprehensive treatment planning. This includes collecting and evaluating dental records as well as pertinent medical and dental findings. Students will understand how to establish a proper diagnosis. Utilizing the obtained records and diagnoses, the student will learn how to develop treatment options and ultimately a sequential treatment plan. Through weekly small group seminars, emphasis will be placed on the thought process of gathering and evaluation of pertinent data resulting in the development of treatment options as well as techniques for communicating a treatment plan to patients. The small group meetings will be followed by the class meeting in a lecture format where treatment planning concepts as well as treatment principles used in the treatment cases will be reviewed and reinforced.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D567. Oral Radiology. 1 Credit Hour.**

This course consists of a series of lectures that deal with fundamentals of radiographic interpretation, radiation biology and protection, selection criteria of radiography, the appearances of normal radiographic anatomy, variations of normal, and abnormalities or disease processes, which are common in the oral and maxillofacial region.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D568. Oral Surgery. 1 Credit Hour.**

A continuation of D339, emphasizing the basic Oral and Maxillofacial management of patients within the scope of the general practitioner. Some advanced concepts are introduced.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D573. Periodontal Therapy and Treatment Planning. 1 Credit Hour.**

A team approach, lecture series course providing evidence-based principles and case based examples of the surgical treatment of periodontal disease. It will present a variety of procedures including the general principles of periodontal surgery, flap designs, gingivectomy techniques, resective osseous surgery, regenerative procedures using bone grafting materials, membranes and biologics, management of furcation problems, periodontal plastic and esthetic surgery and care before and after the surgical procedures. Emphasis will be placed on proper diagnosis and treatment planning through case presentations in class and through a Wiki project. Course prerequisites: successful completion of the sophomore year of the DMD program, and enrollment in junior year.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D589. Jr. Summer Clinic I. 9 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D591. Jr. Practice of Dentistry. 7 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D599. Jr. Summer Clinic II. 6 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D600. Senior Summer Clinic. 12 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D608. Radiology. 1 Credit Hour.**

This course consists of a series of lectures that deal with the concepts of radiographic interpretation of maxillofacial abnormalities or diseases. The course goals are to provide the information and experience necessary for the student to be able to recognize abnormalities or diseases that commonly affect the maxillofacial complex. Radiographic, CT and MRI images are used extensively to demonstrate representative interpretations.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D609. Orthodontics. 1 Credit Hour.**

This course introduces the student to the practice of orthodontics. Also included in the course are presentations of armamentarium and novel systems of orthodontic treatment. The Invisalign System is emphasized. Primarily, this course is designed to enable the student to interact with the orthodontic specialist and the patient for the management of complex orthodontic problems. Additionally, the student will receive practical information on managing the dental practice.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D610. Adv Interdis Implant. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D611. Practice Management II. 1 Credit Hour.**

This course aims to inform students about different areas in Practice Management that can be applied in the practice of dentistry. Since dental students are about to enter the senior year, this course will provide information on different business models, areas or marketing, finance and accounting, as well as prepare students to practice dentistry in a successful business environment.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D612. Advanced Restorative Dentistry Lecture & Lab. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D637. Practice Management I. 1 Credit Hour.**

The goal of Practice Management I is to inform and acquaint the junior student with basic principles and philosophies of practice management, and with the latest and most modern dental technology available today.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D644. Dentistry for Patients with Special Needs. 1 Credit Hour.**

Dentistry for Patients with Special Needs integrates principles of clinical management with behavioral and communication skills needed to provide comprehensive dental care to the special needs population. This course emphasizes practical skills that are evidence based, sensitive to context and applicable in a private practice.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D660. Behavioral Science II. 1 Credit Hour.**

This course will prepare students to assess and treat dental anxiety and dental pain. In addition, the major types of psychopathology that you may encounter in your patients are reviewed, with suggestions for appropriate management techniques and referrals.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D662. Restorative Dentistry VI. 1 Credit Hour.**

This course emphasizes the practical application of fundamental principles of restorative dentistry with particular attention paid to evidence based decision making. The first part of this course will concentrate on how treatment outcomes are measured and assessed. The second part of the course will present several advanced concepts in restorative dentistry.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D666. Pediatric Dentistry. 1 Credit Hour.**

Pediatric Dentistry is an age-defined specialty that provides comprehensive preventive and therapeutic care for infants and children through adolescence, including those with special health care needs. Pediatric Dentistry (D666) will build on and modify specific aspects of restorative, endodontic, orthodontic and surgical principles so that diagnosis and treatment can be tailored to the primary and young permanent dentitions. This course is designed to prepare the undergraduate dental student for the clinical experience of treating children and adolescents in the Pediatric Dental Clinic and ultimately in a general practice setting.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D668. Oral Surgery. 1 Credit Hour.**

A continuation of D568, introducing more advanced oral and maxillofacial concepts to acquaint the student with the full scope of Oral and Maxillofacial Surgery.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D671. Ortho Consideration in General Dental Practice. 1 Credit Hour.**

This didactic course introduces the student to concepts of orthodontic treatment in the young and the adult. The distinction between "orthodontic tooth movement" and "orthodontic treatment" is emphasized. Adjunctive orthodontics and the role of tooth movement in general dental practice are emphasized. Interactions between specialties and sequencing of treatment are accentuated. This course is designed for the student to make the transition from preclinical to clinical activities in orthodontics.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D674. Admissions Clinic I. 1 Credit Hour.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D675. Emergency/Oral Surg. Cl.. 2 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D676. Radiology Clinic I. 1 Credit Hour.**

This course consists of a series of duty rotations for junior dental students in Diagnosis and Radiology Clinics. Students practice radiographic techniques and interpretations in a clinical environment. Intra and extra-oral radiographic techniques and writing radiographic reports will be emphasized in the course.

**Repeatability:** This course may be repeated for additional credit.

**DENT D691. Orthodontics-Clinic. 1 Credit Hour.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D692. Endodontology-Clinic. 2 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D693. Periodontology Clinic. 2 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D696. Pediatric Dent-Clinic. 2 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D697. Restor Dent Clinic Jr. 6 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D700. Summer Clinic II. 6 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D790. Sr. Pract of Dentistry. 12 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D801. Science in Dental Practice II. 2 Credit Hours.**

In this course, students receive online instruction in the scientific method of inquiry and research methodology, including how research is conducted, evaluated and applied to patient care. Students are taught lifelong learning skills on how to access, critically appraise, and apply scientific literature to evidence based oral health care. The ethics of research and ethical decision making in human and animal research is presented. Critical thinking and problem solving is emphasized, particularly as it relates to scientific inquiry, research methodology and critical appraisal of scientific evidence. Blackboard will be used as an adjunct teaching tool for instruction as needed, and for the posting of grades. Online instruction will be through Temple Blackboard site for the course.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D808. Comprehensive Care. 1 to 3 Credit Hour.**

This course has two components, as follows: 1) Grand Rounds Case Presentations: Each student will prepare and present a concise and structured analysis of an intermediate or complex restorative patient care case that he/she has completed at least to point of delivery of a prosthesis. Within intermediate and complex cases, treatments that can be presented are failed treatments that are being redone or treatments where the patient was not satisfied. The analysis will include baseline assessment, treatment plan, comprehensive care provided, outcomes assessment and evaluations of Patient Wellness Reports (PWR). Each presentation will be followed by questions from a calibrated panel of multidisciplinary faculty. 2) Advanced Topics Seminars: An interdisciplinary group of faculty and guest speakers will present a senior seminar series on a review of some fundamental concepts in dentistry, including restorative dentistry, periodontology, endodontology, prosthodontics, digital dentistry, TMD, patients with special needs and disabilities, pediatric dentistry, and complex treatment planning, etc., as well as advanced topics in dentistry.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D809. Practice Management III. 1 Credit Hour.**

This course applies principles of practice management through a seminar series augmented with experiential learning opportunities (Practice Management in Action/PMIA rotation). Students will work with dentists, other dental care providers and staff, from those who manage the first contact with patients to those who are responsible for billing and recall. They will learn, in real-time, about communication skills and patient management.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D810. DPH III: Community Health Engagement. 2 Credit Hours.**

This course applies principles of community health engagement and aims to engender a life-long appreciation for community service. The course will be structured as a seminar series augmented with experiential learning opportunities (Community Outreach Rotation). Students will meet as a class with the course director to explore principles of community engagement and understand the core objectives of the course outreach experience.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D874. Admissions Clinic II. 1 Credit Hour.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D875. Emergency/Oral Surg. Cl.. 3 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D876. Radiology Clinic II. 2 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D891. Orthodontics-Clinic. 1 Credit Hour.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D892. Endodontology-Clinic. 3 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D893. Periodontology-Clinic. 3 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D896. Pediatric Dent-Clinic. 3 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D897. Restor Dent Clinic Sr. 12 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D898. Oral Surgery-Clinic. 2 Credit Hours.**

**Repeatability:** This course may be repeated for additional credit.

**DENT D900. Practice of Dentistry IV. 6 Credit Hours.**

An extension of clinical responsibilities for students who are deficient in clinical requirements. This summer session clinical course will enable the student to complete degree necessary requirements.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D903. Practice of Dentistry V. 9 Credit Hours.**

This course is designed for students who have exceeded the 4 year DMD program who are still deficient in clinical experiences. Students are required to demonstrate additional skills in all clinical disciplines towards achieving the DMD degree.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D932. Perio Honors Program. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D982. Operative Dentistry II. 2 Credit Hours.**

Requirements for the course include completing 11 composite resin restorations, 7 Amalgam restorations, application of rubber dams, completion of "Operative Dentistry Skills" examinations, and two operative competencies (Amalgam and Composite resin).

**Repeatability:** This course may not be repeated for additional credits.

**DENT D983. Dental Public Health Science. 2 Credit Hours.**

Dental Ethics is concerned with medical ethical issues as they relate to dentistry, in the context of a patient centered educational experience. Instruction consists of lectures and class discussions of cases. Readings and cases will be made available electronically before the scheduled lecture. Students should read the material and cases before coming to class, print this material and bring it with them to class. To familiarize the entering professional with various areas of law, enabling legal, ethical, and profitable practice, with lessened risk of lawsuit. The Dental Public Health I course is designed to provide foundation knowledge and experiences on the important role that dentists play in promoting health not only for their patients but also in the communities where they work. Temple University Kornberg School of Dentistry has had a long history of community service and engagement with different population groups. In this course you will learn in lectures, discussions and exercises the foundation knowledge of evidence-based practice to promote oral health among your patients and the community where you will practice. This course will cover three areas: 1) Foundation knowledge for the field of community oral health and dental practice, 2) Principles of oral health promotion, and 3) Prevention of dental caries.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D984. Endodontics. 1 Credit Hour.**

A lecture series designed to offer the student fundamental knowledge in endodontics making emphasis in its clinical application. With a biological perspective, topics such as traumatic injuries of the tooth, endodontic surgery, as well as relationship between endodontics and other dental and medical disciplines is discussed, helping the student to make a smooth transition to the endodontic clinic.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D985. Oral Maxillofacial Pathology Medicine Surgery. 2 Credit Hours.**

To familiarize students with the full scope of pain control and management of the anxious patient using lectures and clinical laboratories to administer and receive injections and nitrous oxide sedation. This course presents medical emergencies that may arise during routine dental care and how to treat them.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D986. Pre-Clinic Orthodontics. 1 Credit Hour.**

The candidate will be enrolled in the Temple University Blackboard Orthodontic Clinic work group which contains the educational modules Orthodontic Diagnosis Part I and Part II. These contain pre-clinical didactic information for orthodontic diagnosis and treatment planning necessary to meet requirements for the orthodontic clinical course.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D988. Pediatric Dentistry. 3 Credit Hours.**

Pediatric Dentistry is an age-defined specialty that provides both primary and specialty comprehensive preventive and therapeutic care for infants and children through adolescence, including those with special health care needs. Pediatric Dentistry (D466) will build on aspects of restorative, endodontic, orthodontic and surgical principles so that diagnosis and treatment can be tailored to the primary and young permanent dentitions. This course is designed to prepare the undergraduate dental student for the clinical experience of treating children and adolescents in the Pediatric Dental Clinic and in a general practice setting. Pediatric Dentistry is an age-defined specialty that provides comprehensive preventive and therapeutic care for infants and children through adolescence, including those with special health care needs. Pediatric Dentistry (D666) will build on and modify specific aspects of restorative, endodontic, orthodontic and surgical principles so that diagnosis and treatment can be tailored to the primary and young permanent dentitions. This course is designed to prepare the undergraduate dental student for the clinical experience of treating children and adolescents in the Pediatric Dental Clinic and ultimately in a general practice setting.

**Repeatability:** This course may not be repeated for additional credits.

**DENT D989. Pediatric Dentistry. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D990. Periodontology. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D991. Orthodontics. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D992. O M P M S. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D993. Operative Dentistry Clinic. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D994. Fixed Prosthodontics I. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D995. Fixed Prosthodontics II. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D996. Removable Prosthodontics I. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D997. Removable Prosthodontics II. 2 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D998. Endodontics I. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

**DENT D999. Endodontics II. 1 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.

## School of Medicine (MEDS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**MEDS 5003. Fundamentals of Biochem. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 5004. Fundamentals of Physiology. 4 Credit Hours.**

Fundamentals of Physiology addresses important topics including membranes and membrane transport, excitation and contraction of skeletal, smooth and cardiac muscle, the heart and blood flow, renal physiology and lung physiology. Important medically related examples will be discussed. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 5006. Microbio and Immunology. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 5007. Human Anatomy. 4 Credit Hours.**

Human Anatomy provides instruction in gross anatomy for postbac students. Important medically related examples will be discussed. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 5008. Medical Pharmacology. 4 Credit Hours.**

Medical Pharmacology provides instruction in pharmacology for postbac students. Important medically related examples will be discussed. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 5009. Biochemistry of Life Systems. 2 Credit Hours.**

This course provides students with an understanding of the basic principles of biochemistry related to pre-health competencies tested by the MCAT. Topics related to these competencies include: protein structure and function; enzyme function and regulation; transmission of genetic information, membrane structure and composition, bioenergetics, fuel metabolism and cell signaling. NOTE: This course fulfills a requirement for students enrolled in the Basic Core in Medical Sciences (BCMS) Post Baccalaureate Program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 5010. Special Topics in Medicine. 3 Credit Hours.**

Special Topics in Medicine discusses important topics in medicine including translational research and evidence based medicine for postbac students. Course syllabus will be provided by the course director.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEDS 5011. The Application of Physical Principles to the Understanding and Practice of Medicine. 4 Credit Hours.**

The principles of the physical world are the foundation of many diagnostic and therapeutic modalities used in the practice of medicine as well as essential physiological processes. This course is offered every fall to provide students with an understanding of the principles and applications of physical science to biological systems and medicine. The application of physical science to medicine will be subdivided into three sections: relationship to human organ function, imaging and diagnosis, and therapies. Topics in the first section include heat, electricity, sound and light waves, and fluids. The second section will describe their application to microscopy, MRI, CT, X-ray, PET and ultrasound imaging. The final section includes therapies for treating disease. The course is lecture based and includes problem solving and presentations by practicing physicians. This course fulfills a requirement for students enrolled in the Basic Core in Medical Sciences post-baccalaureate program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 8004. Macromolecules. 4 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 8010. Seminar Clinical Res. 1 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEDS 8020. Crit Lit Clin Transl Res. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEDS 8030. Grant Writing: Clin Res. 2 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEDS 8051. Intro to Biostatistics. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS 9995. Res Prjct Clin/Trnsl Med. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M001. 1st Yr Med School Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M002. 2nd Yr Med School Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M003. 3rd Yr Med School Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M004. 4th Yr Med School Prog. 12 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M010. Transition to Medical School. 0 Credit Hours.**

The Transition to Medical School course serves to bring together first year medical students from diverse educational and career backgrounds and experiences and introduces them to the new and challenging environment of medical school. Sessions cover important curricular areas such as professionalism, teamwork, study habits, communications skills and personal well-being to provide a foundation for success in medical school.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M011. Fundamentals 1: Human Structure. 0 Credit Hours.**

This course covers the fundamentals of clinical anatomy and imaging, principles of embryology, fundamentals of histology and cell physiology.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M012. Fundamentals 2: Cellular Function. 0 Credit Hours.**

Clinical anatomy and imaging, principles of embryology, fundamentals of histology and cell physiology.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M013. Fundamentals 3: Host Defenses and Threats. 0 Credit Hours.**

General principles of immunology, including the interactions of immune system components in normal and disease states. Immunological methods to diagnose and treat diseases. Structure and function of microorganisms both as microbiota and pathogens, and introduction to major microbial pathogens and their diseases. Additional pathogens will be introduced longitudinally in integrated sessions throughout the organ system blocks.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M014. Fundamentals 4: Basis of Disease and Treatment. 0 Credit Hours.**

Fundamentals of pathology and oncology, principles of pharmacology, and the diagnosis and treatment of infectious disease. Case-based introductions to biostatistics and epidemiology.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M015. Systems 1: Neuroscience and Psychiatry. 0 Credit Hours.**

Development, histology, neuroanatomy, and physiology of the autonomic and central nervous systems. Pathology and pathophysiology of nervous system diseases and treatment modalities will be interwoven. Behavioral topics, including psychiatric illnesses and substance use disorders, will be discussed, along with their treatment and societal impact.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M016. Systems 2: Cardiovascular Medicine. 0 Credit Hours.**

Development, histology, and physiology of the cardiovascular system. Pathology and pathophysiology of diseases related to the cardiovascular system, along with the basis for diagnosis and the pharmacologic, medical, surgical, and behavioral treatment options.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M017. Systems 3: Pulmonary Medicine. 0 Credit Hours.**

Development, histology, and physiology of the respiratory system. Pathology and pathophysiology of diseases related to the respiratory system, along with the basis for diagnosis and the pharmacologic, medical, surgical, and behavioral treatment options.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M020. Systems 4: Nephrology. 0 Credit Hours.**

Development, histology, and physiology of the renal system. Pathology and pathophysiology of renal diseases, along with the basis for diagnosis and the pharmacologic, medical, surgical, and behavioral treatment options.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M021. Systems 6: Gastroenterology and Nutrition. 0 Credit Hours.**

Development, histology and physiology of the gastrointestinal system. Pathology and pathophysiology of diseases of the gastrointestinal system, along with the basis for diagnosis and the pharmacological, medical, surgical, and behavioral treatment options. This course also covers metabolism and nutrition and the effect of nutrient deficiencies and excesses on health.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M022. Systems 5: Endocrinology, Obstetrics and Gynecology, and Urology. 0 Credit Hours.**

Development, histology and physiology of the endocrine system and male and female reproductive systems. Pathology and pathophysiology of diseases of the endocrine system, male and female reproductive systems, along with the basis for diagnosis and the pharmacological, medical, surgical, and behavioral treatment options.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M023. Systems 7: Multi-Organ System Disease. 0 Credit Hours.**

Students will learn the development, histology and physiology of the hematologic, musculoskeletal and dermatologic systems. The pathology and pathophysiology of diseases of the hematologic, musculoskeletal (rheumatologic and orthopedic) and dermatologic systems, along with the basis for diagnosis and the pharmacological, medical, surgical, and behavioral treatment options will also be taught. This course will also include integrated multi-organ system clinical cases, incorporating topics from earlier courses that will require critical thinking and clinical problem solving.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M100. Nutrition and Health. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M101. Fundamentals of Anatomy. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M102. Fundamentals of Medicine 1. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.



**MEDS M103. Biological Systems I: Cardiovascular, Blood, Respiratory and Renal Systems. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M104. Biological Systems II: Gastrointestinal, Endocrine, Bone and Reproductive Systems. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M105. Biological Systems III: Nervous and Musculoskeletal Systems. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M106. Biological Systems IV: Inflammation, Immune System and Skin. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M107. Doctoring 1. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M110. Clinical Immun Topics. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M111. Clinical Informatics: Electronic Medical Records and Data in Healthcare. 0 Credit Hours.**

This elective will give medical students an introduction to the field of Clinical Informatics from the physician perspective. Managing the IT needs of physicians in the hospital and office has emerged as an increasingly important task in health care delivery. There are increasing opportunities for physicians to play a role in guiding the evolution of the EMR systems and the use of data in healthcare. In this elective, students will shadow the Chief Medical Information Officer for Temple University Hospital, gaining an understanding of how IT and data impact the job of the physician, and how physicians can in turn impact the use of IT to support quality, safety and financial initiatives critical to the success of the organization.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M120. Sexual Health. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M130. Reflections on Gross Anatomy. 0 Credit Hours.**

This elective will address issues raised by the first and one of the most powerful rites of initiation into the medical profession – gross anatomy. Topics will include death, dissection, graveyard humor, and (postmortem) physician-patient relations. Reading will include both fiction (Shakespeare, Tillie Olson, Hemingway, William Carlos Williams) and medical essays (Richard Selzer, Lewis Thomas, Robert Coles, Perri Klass). Students will write then read in class three brief pieces in either fictional or essay form.

**MEDS M139. Medical Sign Language. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M141. Intro to Medical Ethics. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M143. Medical Humanities. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M146. Global Health 1. 0 Credit Hours.**

The TEAC/IHO Global Health elective was created to help students expand their educational knowledge and procedural experience so that they can be better prepared to understand global diseases and make a humanitarian difference. The course is taught by faculty members in the department of Emergency Medicine, who have diverse medical backgrounds and have led medical humanitarian missions in Central and South America, Asia and Africa. Whether the participant plans on future global medical experiences or wants an interactive/comprehensive clinical elective to complement his or her education, the TEAC/IHO Global Health Elective has been a fun and highly rated experience for everyone.

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M147. Global Health 2. 0 Credit Hours.**

The Temple Emergency Action Corps/Global Health: Part II elective will provide a comprehensive overview of emergency medical care from the site of the incident to the hospital to provide a framework of disaster recognition, response, and preparedness in the Philadelphia Region. Emergency skills will be explained, taught, and opportunities for actual skill performance provided to each student through time in the Simulation Lab as well as the Emergency Department. The students will have an opportunity to participate in EMS ride-alongs, Fighting Chance, and an advanced triage session. This elective is required for advancement in the TEAC leadership.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M149. Basic Medical Spanish. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M150. Introductory Elective. 0 Credit Hours.**

This generic first and second year School of Medicine elective serves as an introduction to a special topic, often with an interdisciplinary focus. Topics vary from semester to semester and may include an extension of a content area already covered in the required curriculum, an introduction to a new topic or research issue, or exposure to a clinical discipline. First and second year electives are optional and do not impact graduation requirements. Electives are scheduled for seven two-hour sessions each, for a total of fourteen contact hours. Student interest and faculty availability determine topics offered each semester.

**MEDS M170. Advanced Medical Spanish. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M171. Big Friends/Kenderton School. 0 Credit Hours.**

A crucial part of the experience of medical students in Temple is community engagement. In fact, students are asked to reflect on what experiences they have encountered through their immersion in the surrounding community. With such a large role in the development of who we are and who we will become as physicians, we hope to be able to bring an elective to campus that highlights this role and creates a greater partnership with the Kenderton community. Similar to us, Kenderton holds electives for their seventh and eighth grade classes. These electives serve a similar purpose to our own - engage students in something that they may not receive in their everyday curriculum. With mentorship opportunities through Big Friends, we hope to be able to provide the students with an elective that will engage them in medicine and science, something they seem to miss out on in their own classes. Not only will this help the Kenderton community, but it will foster a greater relationship with the neighboring school, which is a big part of our community and our mission to serve it.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M189. Intro Disaster Response. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M191. Intro Disaster Response II. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M193. Introduction to Bioethics. 0 Credit Hours.**

In this lecture/discussion-based course, students will be exposed to a range of key themes, concepts and current controversies in medical ethics. Topics to be addressed may include: Social Determinants of health and urban bioethics, Mediation as a clinical dispute resolution mechanism, Cultural humility and community competency, Disability ethics, Ethics at the end-of-life, Three-parent babies and reproductive ethics, Bioethics, policy, and the values of health care reform.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M194. Bioethics at the Movies. 0 Credit Hours.**

This elective uses feature and documentary film as a catalyst for theoretical and practical discussions of a series of bioethics topics. We also will be looking through the films, treating them as a lens through which to historically understand the evolving relationships between medicine, society, and popular culture. Specific topics to be covered may include: genetics and the social consequences of genetic knowledge; professionalism and humanism in medicine; dying in the 21st century; research with vulnerable populations; illness, disability, and autonomy; research ethics; and access to care, health policy, and health disparities.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M195. Physicians as Credible Messengers in Firearm Violence Prevention. 0 Credit Hours.**

This elective examines how physicians can become more credible messengers and advocates for gun violence prevention. Topics to be covered include: firearm injury epidemiology, violence as a public health issue, the role of physicians in gun-policy, clinical bedside skills related to gun safety and injury, among others.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M200. Community Hosp Svc. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M208. Introduction to Research. 0 Credit Hours.**

Research is a crucial aspect of every physician's career. They must evaluate research to find the best evidence-based ways to treat their patients. And their blend of clinical experience and formal education puts them in the best position to know what patients need and how to achieve it. For these reasons, learning how clinical research is done is a necessity to properly evaluate the literature and hopefully to conduct research in the future. By starting from scratch, creating a research question and culminating in a paper, it will remove the mystique of the research process. Building this foundation for the students will benefit their future patients, make hospitals more efficient, and progress science as a whole. We feel holding the course throughout the year will allow for the required time for students to develop an appropriate time line for their project. The sessions will include: 1. Why research? How to get involved. 2. History, introduction and submission to the IRB (CITI training included). 3. How to formulate a research question (PICO and FINER). 4. Effective literature searching techniques/using a citation manager (EndNote). 5. Rating the literature: level of evidence/open source/"Grey" literature. 6. Study design: types, pitfalls, feasibility. 7. Data sources at St Luke's: Keeping data safe (Redcap). 8. "It is better to have written" introduction to IMRaD, the use of an outline. 9. Methods/Results: a great place to start. 10. Introduction and discussion: constant tweaking. 11. Abstract and meeting/publication basics presentation.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M210. Diseases of Renal/Endo/Repro. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M212. Microbiology/Inf. Dis.. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M214. Diseases of Cardio/Resp. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M217. Doctoring 2. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M220. Epidemiology Journal Club. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M222. Diseases IV: GI/Hem-Onc/MS. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M224. Diseases III: CNS. 0 Credit Hours.****Course Attributes:** M1**Repeatability:** This course may not be repeated for additional credits.**MEDS M225. Disability Through the Lens of Self-Reflection. 0 Credit Hours.**

This elective brings voices from the disability community to the world of medicine. A primary goal is to challenge medicine's imperative to 'fix' disability. A medical diagnosis of a disability often becomes a singular observational lens that isolates and limits people with disabilities. However, by listening to stories directly from members of the disability community, we see instead a perspective that views disability as something that is natural, fluid, and dignified. Learning to embrace diversity and disability through the self-representations, this elective helps prepare future doctors to better contribute to individuals' health, well-being, and flourishing. Students will explore several key theoretical, policy, and medical debates in the field of disability. Specific topics include, for example: stigma and stereotypes; pre-natal genetic testing, neuro-diversity, and disability activism; health policy; medical interventionism; non-traditional communication and informed consent; and self-representation in the arts.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Medicine.**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Medicine.**Repeatability:** This course may not be repeated for additional credits.**MEDS M226. Arts Workshop. 0 Credit Hours.**

Arts Workshop will be a hands-on workshop style class in which students will draw with pencil and ink, paint with watercolor and acrylic, and create an art book over the course of the elective. The goal is to provide a hands-on creative outlet, a fresh perspective on perspective, and improve observational skills and nourish creativity. Classes will build each week on previously explored art concepts and will focus in part on translating observational skills into visual representation using plants, birds, landscapes, and the human body.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Medicine.**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Medicine.**Repeatability:** This course may not be repeated for additional credits.**MEDS M227. Fundamentals of Improv Theater. 0 Credit Hours.**

In this elective, students can expect to learn the fundamental skills of improvisation and how it applies to caring for patients. Improvisation is a collaborative art form built on listening, supporting, creativity, intuition, quick response and, well, fun. Students will sharpen their listening skills, their ability to use intuition at the bedside talking with patients, and developing empathy.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Medicine.**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Medicine.**Repeatability:** This course may not be repeated for additional credits.**MEDS M230. Receptive Music Experiences for Future MDs. 0 Credit Hours.**

This elective course will actively engage students in live and recorded music experiences with the intent of increasing emotional self-awareness and empathy towards others. Through discussion and journaling, students will be encouraged to reflect on these musical experiences, as well as the relationship between personal experiences and the practice of medicine. This class will deepen personal understanding of the relevance of music in self-care practices and for meaningful interpersonal interactions. Students will learn of the physiological and psychological benefits of engaging with music for self-care and engage in relaxation experiences as well as determine preferred music for personal relaxation. They will explore ways that receptive music experiences support self-awareness and self-expression.

**Repeatability:** This course may be repeated for additional credit.**MEDS M233. Bridging Gap Clerkship. 0 Credit Hours.****Course Attributes:** M5**Repeatability:** This course may not be repeated for additional credits.**MEDS M234. Yoga and Writing. 0 Credit Hours.**

In this Yoga and Writing course we will place our bodies on the yoga mats - and we will place our words with grace on the page. You will let go, tell your necessary stories, sweat, breathe and laugh through this non-dualistic approach to writing and yoga. In this 7-week course, you will learn about the history of yoga as a spiritual and physical discipline as we devote each week to both yoga exercises and writing exercises. You will move through writer's block by using yoga exercises designed to free up mental and physical space. You will tell necessary stories from the heart/mind and have the opportunity to work with these spontaneous writings in class. We will study and experience - through our mind/body - how Yoga's holistic approach to health can complement the Western medical practice.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M235. History of Medicine. 0 Credit Hours.**

Certain events in the history of medicine have had a major impact on the practice of medicine today. We propose to teach a course that in no way attempts to be a survey of medical history but one in which selected vignettes that have had a major impact will be featured. The course will be taught in an interactive format based on readings selected by the course instructors. Biographies of seminal individuals in the history of medicine in addition to major discoveries and events will be the focus. Ideally participants will select an event or individual and prepare either a talk or paper to conclude the course. Examples of potential topics include: The discovery of the structure of DNA, the Cocoanut Grove Fire of 1942, Pasteur's discoveries, individuals who contributed to advances in transplantation (specifically Thomas Starzl), self-experimentation, and the discovery of ABO blood groups.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M236. Specialized Anatomy Review. 0 Credit Hours.**

The course is designed to provide second-year medical students with an advanced knowledge and appreciation of the structure and clinical function of the human body with particular emphasis on a specialized region of their choice. This course involves small group laboratory, case-based clinical anatomy review, and radiology/medical imaging review sessions. Learners will also have the opportunity to serve as Teaching Assistants in the cadaver lab and support first-year medical students in the Fundamentals 1 course.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M240. An Exploration of Narrative Medicine. 0 Credit Hours.**

Storytelling is an indispensable part of medicine, too often overlooked. But the pendulum is swinging back! In this class, we will celebrate the joy of telling stories, and the good that can come of it. We will talk about ways to make sure the human experience stays front and center as students move forward in their path to becoming doctors. We will talk about how to listen, how to earn trust, how to use stories as an effective way to communicate with patients. We will read and discuss examples of great medical storytelling by physician writers and journalists, and look at how this has enriched the lives of patient, physician, and the public. Students will also visit patients in the hospital, and write two short pieces of their own in any style they please. Reflection in any form is a great way to process the intensity of experiences in medical school and as a physician. By the end of the seven weeks, students will have improved their storytelling skills and gained appreciation for the importance of stories in medicine. They will have gained experience interviewing and eliciting patient stories, and they will have muted or at least diminished any fear of writing.

**MEDS M241. An Exploration of Meaning through Stories, Poems, and Plays. 0 Credit Hours.**

Medical school is sometimes a rollercoaster through thickets of facts, emotion, and doubt. As in other parts of life, meaning and purpose can get lost. In a spirit of playful inquiry, the class will read, discuss, and write about various approaches to create meaning, including work by Italo Calvino, Mary Oliver, J.K. Rowling, Billy Collins, Martin Buber, and Maurice Sendak. With apologies to Monty Python, the class will address fundamental questions. How do we preserve meaning in the face of sorrow or tragedy, and in the daily grind? How might religion, humor, and art nurture a sense of self and meaning? What is the role of intimacy and compassion? And when might ambiguity support meaning? Students will meet as a group for seven, two-hour Friday afternoon sessions, spread over three months in the fall. Reading assignments will be very short. Every other session, students will bring a brief written response in any genre they choose to share as a prompt for class discussion.

**MEDS M243. Humans of North Philly: Portraits from the Streets. 0 Credit Hours.**

In this class, working with photojournalist Michael Perez, students will descend into the streets around the medical school, seeking out residents to interview and photograph. Students will follow their hearts and instincts, looking for people who they believe will make a great portrait and have an interesting story to tell. The students will approach their subjects with sensitivity and respect, ask for permission to take photographs, and then interview the subject of the photo. As part of the class, students will write a little story to accompany their photos, the best of which will hang in a gallery show in the MERB. By the end of the elective, students will have learned how to approach strangers and initiate conversations, to appreciate the stories of the residents of this community who so often are the patients at Temple Hospital, and to see the world literally and figuratively through a new lens. Students will develop a sensitivity and communication skills that will help them as clinicians. They will also learn technical skills on how to use a camera.

**MEDS M244. Narrative and Relationship-Centered Care. 0 Credit Hours.**

This elective will introduce medical students to narrative approaches to clinical practice and the influence of stories in patient-centered care. By listening, writing, and attending to patient stories, students will strengthen their written and oral intake skills along with developing a deeper understanding and awareness of individual patient experiences, the influence of a patient's cultural background in her/his healthcare, the importance of building patient-physician relationships, and the power of empathy. Students will learn the complexities of narrative texts by participating in close readings and conducting critical analyses of patient stories before collecting and/or writing their own narratives.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M245. HIV Prevention Corps. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M248. Business of Medicine. 0 Credit Hours.**

**Course Attributes:** M2

**MEDS M250. Research and Grantsmanship for Medical Students. 0 Credit Hours.**

This course targets first and second year medical students who wish to learn how to identify, prepare a proposal and submit successful applications. The course will cover NIH, NSF and foundation granting agencies. This learning opportunity provides medical students the skill set for grant writing if they wish to become successful clinician scientists. Curriculum will include a series of interactive skills development presentations by basic science and clinical faculty at LKSOM who have successful research portfolios at Temple University. Students will have the opportunity to select a mentor, identify a funding opportunity and construct a proposal for submission.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M260. My Daughter's Kitchen comes to Medical School. 0 Credit Hours.**

Once a week, for seven weeks, Philadelphia Inquirer Food Editor Maureen Fitzgerald, as part of her My Daughter's Kitchen healthy cooking initiative, [www.philly.com/mydaughter](http://www.philly.com/mydaughter), will prepare healthy meals with students in the College of Public Health's kitchen down the street from the MERB. Students will learn how to slice, saute, simmer, roast, bake and in every way prepare a meal for six. And then they will all sit down to a hot meal. Students, with counsel from the instructor, will each come up with one recipe that meets nutritional and affordability requirements. Discussions at mealtime will focus on techniques and strategies to deliver this information – the value, ease and pleasure of cooking your own healthy meals – to patients. For the last class, students will invite a group of patients in need of healthier eating habits and cook a meal for them, sharing what they have learned. These future physicians will literally be able to hand their patients a recipe and say, "This vegetable soup or this turkey sloppy joe is healthy and easy and good for you because I made it myself!" They can even give cooking or preparation tips! Or suggest where in the neighborhood to buy the ingredients! At the end of the class, students will have an option to write a reflection of 250 to 500 words. Ms. Fitzgerald will periodically write and publish reports describing the class for a general audience.

**MEDS M265. Mind-Body Medicine Elective. 0 Credit Hours.**

This elective is a practical introduction to mind-body medicine. We will explore mind-body medicine from two points of views: primarily, as a practical set of techniques and skills to promote students' own well-being, resilience, mindfulness and empathy; and secondarily, as an introduction to practices about which students may choose to learn more and counsel their future patients. Techniques include mindfulness meditation, guided imagery, biofeedback, breathing techniques, and other mind-body approaches that can alleviate stress and foster self-awareness and self-care. Each session will begin with an opening meditation, followed by a short talk on the technique of focus for that session. The majority of the students' time will be spent practicing and then reflecting on that practice through discussion with the group. Students will be exposed to mind-body medicine skills during session time and encouraged to practice them at home.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M270. Artful Thinking. 0 Credit Hours.**

Students will attend small-group sessions held in the galleries of the Pennsylvania Academy of Fine Arts. Over the six weeks, the students will learn about the rich history of painting and medicine in Philadelphia, including discussion of Eakins' The Gross Clinic and the Agnew Clinic. They will be introduced to research showing that observational skills for clinical application are proved to be enhanced by looking at art, and they will participate in a series of exercises to improve their own acuity of vision and diagnosis. They will focus on how doctors can use art with patients and with themselves, including building important sociocultural and therapeutic skills. Students focus on developing emotional intelligence and considering visual art as a modality for interrogating cultural and gender biases that they or their patients may hold. In one class, they will also draw studio models to practice applying their understanding of human anatomy.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M275. Cannabinoids (Medicinal Marijuana). 0 Credit Hours.**

The recent approval of medicinal cannabinoids and the frequency of patient self-medication make it imperative that physicians are familiar with the scientific background related to cannabinoids and their effect on physiologic and pathophysiologic function. The course will cover the endogenous cannabinoid system and how modifications of this system can influence both therapy and pathology for a number of diseases. It will also examine legal issues related to the use of medicinal and recreational marijuana.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M276. Case Based Topics. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M280. Health Education and Advocacy Resources at Temple (HEARTS). 0 Credit Hours.**

The HEARTS Clinic at Temple/St. Luke's provides education and medical care to uninsured and underinsured patients in the Southside of Bethlehem. Our focus this year is initiation of a Diabetes Prevention Program (DPP) aimed at preventing the development of diabetes in prediabetics and preventing the progression of diabetes in newly diagnosed diabetics. The second year student's role is to be a student leader of the DPP. The DPP consists of one hour of education, which we are basing off of the CDC's prevent type 2 diabetes pre-made educational materials. The student is expected to run a 1-hour education session, followed by participation/leadership of a 1-hour cooking/exercise class.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M295. Cmplmnty/Altern Med III. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M296. Cmplmnty/Altern Med I. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M297. Cmplmnty/Altern Med II. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M298. Independent Study/Research. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may be repeated for additional credit.

**MEDS M299. Pre-Clerkship Biomedical Research Elective. 0 Credit Hours.**

This elective is designed for pre-clerkship students to learn and participate in clinical or translational research. Students will gain knowledge and skills in best practices in research, IRB procedures and research methodologies.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M306. Faculty Mentored Scholarly Experience 2. 0 Credit Hours.**

This is a required course to enable students to initiate or complete a faculty mentored scholarly experience. In the FMSE courses, students will apply a systematic approach to a scholarly project with the support of a faculty mentor.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M307. Clerkship Longitudinal Biomedical Research. 0 Credit Hours.**

This elective is designed for medical students looking for an advanced specialty clinical research experience, to increase understanding of IRB protocols, utilize EPIC data in research methodology.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M311. Intersession: Integrated Topics to Prepare for Surgery. 0 Credit Hours.**

The Intersession: Integrated Topics to Prepare for Surgery is a 3.5-day course immediately preceding the Surgery Clerkship. The goal is to ensure students' readiness to successfully participate in learning on the clerkship and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group case-based discussions and clinical skills sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M312. Intersession: Integrated Topics to Prepare for Family Medicine and Psychiatry. 0 Credit Hours.**

The Intersession: Integrated Topics to Prepare for Family Medicine and Psychiatry is a 3.5-day course immediately preceding the Family Medicine and Psychiatry clerkships. The goal is to ensure students' readiness to successfully participate in learning on the clerkships and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group case-based discussions and clinical skills sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M313. Intersession: Integrated Topics to Prepare for Ob-Gyn and Pediatrics. 0 Credit Hours.**

The Intersession: Integrated Topics to Prepare for Ob-Gyn and Pediatrics is a 3.5-day course immediately preceding the Obstetrics & Gynecology and Pediatric clerkships. The goal is to ensure students' readiness to successfully participate in learning on the clerkship and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group case-based discussions and clinical skills sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M314. Intersession: Integrated Topics to Prepare for Internal Medicine. 0 Credit Hours.**

The Intersession: Integrated Topics to Prepare for Internal Medicine is a 3.5-day course immediately preceding the Internal Medicine Clerkship. The goal is to ensure students' readiness to successfully participate in learning on the clerkship and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group case-based discussions and clinical skills sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M315. Mid-Year Intersession: Academic Coaching and Career Development. 0 Credit Hours.**

The Mid-Year Intersession: Academic Coaching and Career Development is a 5-day course at the mid-point of Phase 2. The goal is to provide individualized enhancement of knowledge and skills, to develop individualized learning goals for the remainder of Phase 2 and for Phase 3, and to offer the opportunity for career exploration. The course will include small group discussions, skill development sessions, self-directed learning, clinical experiences, meetings with career advisors, and individual coaching sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M316. Intersession: Black (Psychiatry and Neurology). 0 Credit Hours.**

The Intersession: Black is a 3.5-day course immediately preceding the upcoming clerkships. The goal is to ensure students' readiness to participate successfully in learning on the clerkships and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group case-based discussions and clinical skills sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M317. Intersession: White (Internal Medicine and Pediatrics). 0 Credit Hours.**

The Intersession: White is a 3.5-day course immediately preceding the Internal Medicine and Pediatrics clerkships. The goal is to ensure students' readiness to participate successfully in learning on the clerkships and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group case-based discussions and clinical skills sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M318. Intersession: Silver (Family Medicine and Faculty Mentored Scholarly Experience). 0 Credit Hours.**

The Intersession: Silver is a 3.5-day course immediately preceding the Family Medicine clerkship and the Faculty Mentored Scholarly Experience course. The goal is to ensure students' readiness to participate successfully in learning on the clerkship and Faculty Mentored Scholarly Experience course and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group and large group and skills building sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M319. Intersession: Red (Surgery and Obstetrics and Gynecology). 0 Credit Hours.**

The Intersession: Red is a 3.5-day course immediately preceding the Surgery and Obstetrics and Gynecology clerkships. The goal is to ensure students' readiness to participate successfully in learning on the clerkships and further students' ability to apply learning related to relevant content from the longitudinal health science curriculum. The course will include small group case-based discussions and clinical skills sessions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M337. Transition to Phase 2. 0 Credit Hours.**

Transition to Phase 2 is a 1 week-required course offered at the beginning of the clerkship year (Phase 2). The course contains a review of basic clinical skills and sessions to help prepare students for clinical rotations.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in MEDS M010, MEDS M011, MEDS M012, MEDS M013, MEDS M014, MEDS M015, MEDS M016, MEDS M017, MEDS M107, MEDS M020, MEDS M021, MEDS M022, MEDS M023, and MEDS M217.

**MEDS M338. Doctoring 3/OSCE. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M339. Introduction to COVID19. 0 Credit Hours.**

This 2-week course will introduce students to the basic medical and public health issues surrounding the COVID19 pandemic. Students will engage in independent learning through reading, online lectures, and modules. They will participate in discussions and complete two assignments. The course will be Pass/Fail and combined with another 2-week elective will fulfill credit for one elective course.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M401. Non-Graded Specialty Experience. 0 Credit Hours.**

This course provides the opportunity for students to engage in a clinical learning experience at another LCME-accredited institution. This opportunity will enable students to broaden their experience through exposure to a different patient population in a novel clinical environment to prepare them for residency.

**Repeatability:** This course may be repeated for additional credit.



**MEDS M411. Community Health. 0 Credit Hours.**

This elective will provide an overview to the medical students of important Community Health and preventive Medicine topics including Access to Care, Healthy Living, Maternal and Child Health Services, HIV Care, Elder Health and Mental Health topics. The student will be able to select a specific community health topic to explore in more depth and complete a project, i.e. nutrition, diabetes prevention, etc. The course will provide additional education about Social Determinants of Health (SDOH), Health Equity and Lifestyle Medicine topics, which are not generally covered in other clerkships/electives.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M425. M4 Literature and Medicine On-line Elective. 0 Credit Hours.**

Students will be divided into groups of 4-6 members who will collectively select three books from a suggested reading list. One or two will be nonfictional, about healthcare practice or the factual or autobiographical experience of being a patient. The remaining one or two books will be fictional, bearing some relation to health or healthcare. After completing each book students will participate in an on-line discussion on Canvas, in which each student poses one question related to the book and all other students in the group respond. Students will compose two 3-4 page papers, one at the outset of the course where they describe their personal background and one at the finish describing a critical incident that shaped their career goals. A faculty preceptor will monitor and help guide group discussions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M426. Narratives of Alcoholism and Addiction. 0 Credit Hours.**

This course will explore narratives of alcoholism and addiction in writing and in film. By reading, discussing, and reflecting on the individual patient and family narratives, students will strengthen their ability to hear, consider, and interpret the stories of others. Understanding the individual experiences and stories of patients can yield universal lessons for effective health care. While the opiate epidemic is a national problem, Kensington, Philadelphia is home to the largest open-air heroin markets in the country. Temple University Hospital, Episcopal Campus is a particularly dense site of engagement with people who use opioids and students will spend time shadowing in the Emergency Department during the course.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M427. How and Why Doctors Write. 0 Credit Hours.**

We will read and examine a variety of physician writings. Authors will include nationally known doctors, such as Atul Gawande and Oliver Sacks, contributors to newspapers and medical journals, as well as Temple doctors and students. We will discuss the motivations for writing as well as the works themselves. Students are expected to spend out-of-class time reading and writing and by the end of the course each student will have an 850-word essay completed on a topic of their choosing.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M428. Narratives of Grief and Loss. 0 Credit Hours.**

This course will explore narratives of grief and loss. Participants will read, discuss, and reflect on the individual patient and family narratives. Students will strengthen their ability to hear, consider, and interpret the stories of others. The individual experiences and stories of patients will yield universal lessons for effective health care. Participants will be able to use learning from the course in future patient care interactions.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M429. Non-fiction Writing. 0 Credit Hours.**

This course is designed for the student who would like to write. Through a series of exercises, we will generate ideas for reflective and opinion writing. If there is student interest, other non-fiction genres may be explored. We will evaluate effective pieces of writing and work to create our own. Students are expected to spend out-of-class time reading and writing and by the end of the course each student will have an 850-word essay completed on a topic of their choosing.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M444. Community Health. 0 Credit Hours.**

This elective will provide an overview to the medical students of important Community Health and preventive medicine topics including Access to Care, Healthy Living Maternal and Child Health Services, HIV Care, Elder Health and Mental Health topics. The student will be able to select a specific community health topic to explore in more depth and complete a project, i.e. nutrition, diabetes prevention, etc. The course will provide additional education about Social Determinants of Health (SDOH), Health Equity and Lifestyle Medicine topics, which are not generally covered in other clerkships/electives.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M447. Transition to Phase 3 (TTP3). 0 Credit Hours.**

TTP3 is a 1-week required course offered at the beginning of Phase 3. During this course, students learn and practice the advanced clinical skills needed in the Phase 3 courses.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M494. Doctoring Teaching Elective. 0 Credit Hours.**

This elective will provide an opportunity for 4th year students interested in Academic Medicine to develop and/or revise Doctoring Curriculum, provide peer to peer instruction through teaching of clinical skills, and facilitate small group discussions.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in MEDS M107 and MEDS M217.

**MEDS M667. Transition to Residency. 0 Credit Hours.**

This is a 1-2 week course near the end of the 4th year. The course includes lectures, small group sessions and simulation experiences. Students will learn and practice important skills needed for internships. They will reflect with classmates on the medical school experience and prepare to transition to the intern year.

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M905. International Med Elective. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M906. Research Elective. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may be repeated for additional credit.

**MEDS M908. Faculty Mentored Scholarly Experience 3a. 0 Credit Hours.**

Students will participate in scholarly work during the 4-week block. This is work to advance an ongoing project. This work is done with mentorship by a faculty member. Students completing this course will be expected to write and submit an abstract. All work will be presented at the FMSE Poster Symposium prior to graduation.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in MEDS M306.

**MEDS M909. Interprofessional Healthcare Quality Improvement. 0 Credit Hours.**

This interprofessional course will combine medical students with students from nursing and other professions in a healthcare quality experience. The didactic curriculum, based upon the Institute of Healthcare Improvement materials, is presented in longitudinal workshop sessions over a semester. During the following semester, interprofessional student teams identify a clinical quality gap and use the PDSA (Plan-Do-Study-Act) model to assess the gap, design an intervention, and assess the impact of their intervention. Project outcomes will be presented at a scholarly venue(s).

**MEDS M913. Patient Safety/Quality. 0 Credit Hours.**

Patient safety and quality improvement is now, more than ever, becoming recognized as a cornerstone of the practice of medicine. These concepts are fundamental, not only to one's personal development and growth as a physician, but to the future of healthcare. This course is designed for those students who have an interest in patient safety and quality improvement and wish to expand upon their knowledge outside of the standard curriculum. This course will integrate several core competencies that are central to the mission of LKSOM, especially those related to Systems Based Practice and Practice Based Learning and Improvement that focus on quality, improvement of care, and utilization. Furthermore, students in the course will attend several hospital committee meetings and, by doing so, will learn more about both inter-professional collaboration and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**MEDS M920. Faculty Mentored Scholarly Experience 3b. 0 Credit Hours.**

This elective is for students who require an additional block to advance and complete their scholarly work. The expectation for students completing this course will be to write and submit an abstract for presentation.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in MEDS M908.

**MEDS M990. Health System Administration. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M992. Doctoring 4/Capstone. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M995. Medical Advocacy. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M996. Academic Medicine. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**MEDS M997. Independent Study. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

## School Psychology (SPSY)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SPSY 5303. Ethical and Legal Issues. 3 Credit Hours.**

This course is designed to introduce students to the ethical codes relevant to their discipline for students studying ABA (Behavior Analyst Certification Board Professional and Ethical Compliance Code), School Psychology (American Psychological Association Ethical Principles of Psychologists and Code of Conduct; National Association of School Psychologists Principles for Professional Ethics), and Counseling (American Psychological Association Ethical Principles of Psychologists and Code of Conduct; American Counseling Association Code of Ethics). Students will explore common ethical and legal issues such as boundaries of competence, multiple relationships, confidentiality, research, client/student rights, effective treatment, etc. Students will begin to develop a professional decision making framework for resolving ethical conflicts around such issues. Students will also become conversant with current legislation and regulations relevant to their practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 5667. Introduction to Cognitive Assessment. 3 Credit Hours.**

Intensive overview and training with diagnostic instruments of cognitive abilities. Practice with specific tests of intelligence, memory, and cognitive processing. Introduction to the assessment of adaptive behavior. Discussion of theories of cognitive functioning and research literature on intelligence testing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 5671. Integrative Assessment. 3 Credit Hours.**

The purpose of this course is to develop advanced skills in the individual assessment of children and adolescents. One major component of the course will be learning additional tests of cognitive skills. The second major component will be learning standardized, norm-referenced tests of academic achievement. The third major component will be coverage of assessment of children from a variety of cultural, language, and other backgrounds. The focus will be on administering, scoring, interpreting, and integrating test results to provide a full and accurate picture of the student. Successful students will become familiar with test administration, scoring, and interpretation of a variety of instruments and techniques, as well as gain practice in demands analysis and integrating assessment findings across cognitive, academic, and social/emotional domains. This course is designed for matriculated school psychology students only. The tests taught in this course are secure instruments, which can be administered only by psychologists; therefore, only in the rarest of circumstances will a student from another program be permitted to enroll. A course in introductory cognitive assessment (SPSY 5667 or equivalent) is a prerequisite of this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in SPSY 5667.

**SPSY 5672. Personality and Psychotherapy. 3 Credit Hours.**

Covers major theories of personality and psychotherapy, and applications to counseling, assessment, and projective testing in the schools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: School Psy Clinical Clearance.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 5673. Introduction to the Diagnostic Process. 3 Credit Hours.**

Discussion of the integration of data from case histories, observations, interview and tests in making differential diagnosis. Diagnosis using DSM-IV-TR and educational identification under special education law with both covered. Overview of major diagnostic categories found in schools. Comprehensive study of skills in interviewing, report writing, systematic observation of child behavior, and evaluation of teaching effectiveness. Major emphasis on conceptualizing and writing recommendations for educational remediation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 5674. Social and Emotional Aspects of Behavior and Assessment. 3 Credit Hours.**

This course is intended for graduate students in the helping professions. The course provides an overview of the affective/emotional and social aspects of behavior. Topics include defining emotion, emotion experience, and regulation, intrapersonal and interpersonal functions of emotion, gender and cultural differences in emotion, emotion across the lifespan, and emotion and well-being. Building on this foundation, the course provides theoretical and applied training in assessment techniques useful in evaluating children and adolescents with social, emotional, and behavioral difficulties. It covers a wide variety of methods including the use of direct and indirect assessment techniques for children and adolescents. The course also addresses the development of cultural competence in assessment, classification, decision-making, and intervention planning. The first portion of the course focuses on the foundations of social and emotional functioning. The second portion centers on methods of behavioral and social-emotional assessment. The third portion of the course covers the assessment of specific problems, competencies, and populations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 5676. Applied Behavior Analysis. 3 Credit Hours.**

Introduction to the functional analysis of behavior of children in the school setting. Includes behavior theory, assessment, interaction, and evaluation. A behavior-change program is conducted.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 5771. Biological Aspects of Behavior. 3 Credit Hours.**

This course is designed to provide graduate level students with an understanding of principles, theories, and research in biological/physiological psychology. A major focus will be on the relationship between the brain and behavior. General topics will include: neuroanatomy and physiology, neural communication, behavior genetics and evolutionary psychology, brain damage and plasticity, vision, movement, emotions, learning, memory, language, intelligence, and neurological and psychological disorders. One of the objectives of this course is to relate the content to school-age children. Students will be expected to apply what they have learned to the science and practice of school psychology. Students will also be expected to critically evaluate relevant findings and claims generated by neuroscience research. The course will incorporate lecture, directed reading and writing assignments, case studies, videos, and class discussion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8621. Academic Assessment and Intervention. 3 Credit Hours.**

This course is intended to introduce pre-service school psychologists to the theories, skills, and ethical and legal considerations of academic assessment in school settings. The assessment class will be taught within the over-arching framework of an ecological, multi-tiered assessment model. The link between assessment and instructional decision-making will be emphasized throughout the course, with attention to assessment practices for learners with diverse needs and providing instructional support to teachers. Students enrolled in the course will learn how to select, design, administer, score, interpret, and report results for a variety of assessment approaches related to monitoring instructional efficacy and learner outcomes in a standard-aligned model. Assessment approaches will include: (a) authentic; (b) screening; (c) diagnostic; (d) formative; (e) benchmark; and (f) summative.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in SPSY 5676 (may be taken concurrently)

**SPSY 8770. Seminar: Special Topics in School Psychology. 3 Credit Hours.**

Advanced seminar considering the literature in a specific area of school psychology research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 8771. Social Psychology of Education. 3 Credit Hours.**

Discussion of principles of social psychology as applied to the school as an institution. Emphasis on the psychology of planned educational change. Theoretical bases of the process of change and innovation within the schools. Rationale for intervention strategies

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: School Psy Clinical Clearance.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8772. Seminar: Role and Function of the School Psychologist. 3 Credit Hours.**

Analysis of role and functions of school psychologists. Study of relevant research dealing with varied roles the school psychologist can play within the school system and in other settings. Consideration of legal and ethical practices in school psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8773. Developmental Psychopathology and Low Incidence Disabilities. 3 Credit Hours.**

This course will look at child psychopathology from a development perspective, covering typical social-emotional and cognitive development and then examining how this gets disrupted or otherwise altered to result in child and adolescent psychopathology. We will examine classification systems and models of diagnosis and disease, as well as alternatives to the more traditional "medical model" such as examining risk, resilience and the role of psychosocial and cultural factors. The course will aim to teach students to identify potential mental/behavioral health issues in children and adolescents, and then understand and be able to explain to others what the implications of this might be for a given child or teen. Students will think critically about the ethics and issues of controversy around child and adolescent mental health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8774. Professional Issues and Literature in School Psychology. 3 Credit Hours.**

Doctoral seminar in professional issues and the research literature in school psychology. Required for School Psychology Ph.D. students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8775. Legal and Ethical Problems and Professional Responsibility. 3 Credit Hours.**

This course familiarizes advanced graduate students in psychological studies with ethical principles and codes of conduct as well as legal requirements and legislative outcomes to guide our practice as psychologists and pupil services employees/administrators. The APA Ethical Principles and Code of Conduct and NASP Professional Conduct Manual will be perused, as well as PA Law governing the licensure and practice of psychologists. Also covered in this course will be federal and state law related to regular and special education, civil rights, and gifted education. Case law surrounding these issues will be explored.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: School Psy Clinical Clearance.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8776. History and Systems of Psychology. 3 Credit Hours.**

This course is for graduate students in training to become psychologists. It introduces students to the history of psychology and the theoretical schools of psychology practice. It is required for students in the School Psychology PhD program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8777. Theories and Techniques of Counseling for Youth. 3 Credit Hours.**

The purpose of this course is to develop the basic skills students will need in order to conduct successful school mental health counseling interactions. We accomplish this through the practice and development of counseling microskills in an experiential format. Students will have an opportunity to begin to develop mastery of these skills through in class role-playing, mock interviews, and videotaped counseling session role-plays and supervised counseling experiences to improve interpersonal, emotional, and social functioning in young children to adolescents. Students learn to design, deliver, and evaluate evidence-based prevention and intervention approaches and consultative mental health services. By working alongside a field site supervisor, students engage in case review, analysis, and delivery of counseling services designed to mirror expectations placed on mental health professionals in school and community settings. Self-reflection, transcript analysis, and peer, instructor, and supervisor feedback are employed to develop professional and personal individual and group counseling skills within a multi-tiered system of support.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 8780. Topical Seminar in School Psychology. 1 to 6 Credit Hour.**

Special topics of interest to the school psychologist. Topics may include therapeutic problems, school discipline problems, parenting and remediation strategies. Topics may vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 8787. Seminar on Verbal Behavior. 3 Credit Hours.**

Advanced course in applied behavior analysis with an emphasis on verbal behavior. Designed to provide students with an overview of verbal behavior (as defined in the field of applied behavior analysis) and an overview of its practical application in teaching language to children with diagnosed language delays.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SPSY 5676.

**SPSY 9487. Professional Issues and Practicum. 1 to 3 Credit Hour.**

Students will complete a school-based practicum, one day per week. The program will assign you to a school for this practicum. Your supervisor must be a certified school psychologist with at least 5 years of experience in the field. You should plan to be at your site one day per week (6 to 8 hours), for a total of at least 225 hours across the entire school year. The weekly class will include group supervision and discussion of cases, plus a didactic portion covering role and function and professional issues in school psychology.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: School Psychology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9488. Advanced Practicum in School Psychology. 1 Credit Hour.**

Doctoral students complete advanced practicum, generally two days per week for an academic year. They are responsible for arranging this advanced practicum placement. In the third year, these placements are typically in specialized schools, agencies, clinics, or hospitals. In the fourth year, these placements may include public schools to allow students to complete the required 600 school-based hours for certification. Advanced practicum supervisors must be doctoral-level practitioners, appropriately credentialed for the site. In most cases, the supervisor is a licensed doctoral-level psychologist. Students should plan to be at their sites two days per week, for a total of at least 400 hours over the course of an academic year.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9551. Consultation. 3 Credit Hours.**

This course consists of learning about consulting with teachers regarding behavior change, instructional consultation, and mental health consultation. The course also addresses the assessment of treatment integrity. This introductory graduate course is designed to provide students with theoretical background and applied training in school-based psychological consultation. Students will be exposed to a variety of theoretical models of consultation (e.g., behavioral, mental health, ecological, instructional, organizational, and cross-cultural perspectives), and will have opportunities to develop relevant skills (e.g., problem-solving, data collection, and communication/interpersonal skills). The course includes both didactic and applied components, and will involve such diverse activities and assignments as readings, class discussions, lectures, and role-plays. This course will be conducted in a mixed format that includes lecture, discussion, and group activities. Students are expected to come to class on time each week, having completed all assignments, and participate actively in class discussions and activities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPSY 9587. School Consultation. 3 Credit Hours.**

Extensive school practicum (practicum of 3 hours per week) consulting with teachers regarding behavior change, instructional consultation, and mental health consultation. Includes assessing treatment integrity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: School Psy Clinical Clearance.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9687. Clinical Supervision Seminar in School Psychology. 3 to 12 Credit Hours.**

Case studies by the student in the Psychoeducational Clinic (taken concurrently) are reviewed in depth. Assessment, observations, interviews, diagnosis, educational identification, and remedial strategies are covered. Open only to matriculated school psychology students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9688. Psychoeducational Clinic. 3 Credit Hours.**

A practicum course providing supervised training in psychoeducational assessment and counseling of children with learning problems. Open only to matriculated school psychology students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9787. Practicum on Children with Low Incidence Disabilities. 3 to 6 Credit Hours.**

Supervised experience in schools or related settings assessing students with a variety of disabilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: School Psy Clinical Clearance.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9788. Seminar on Children with Low Incidence Disabilities. 3 Credit Hours.**

Training and supervision on special tests, rating scales, and observational assessment of children who are blind, deaf, or have disabilities such as mental retardation, autism, orthopedic disabilities, or multiple disabilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: School Psy Clinical Clearance.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9876. Supervision of Psychological Services. 3 Credit Hours.**

This course will prepare school psychologists to conduct effective, ethical clinical supervision. Issues of administrative supervision and evaluation of school psychological services will also be addressed. Both theory and practice will be emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SPSY 9687.

**SPSY 9885. Internship in School Psychology. 3 to 12 Credit Hours.**

Supervised internship as a full-time school psychologist in an approved school system, intermediate unit, or consortium.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9882. Independent Study in School Psychology. 1 to 6 Credit Hour.**

Intended to meet the needs of students in school psychology who desire to carry on an individual investigation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9886. Internship in School Psychology. 1 to 12 Credit Hour.**

Supervised internship as a school psychologist in an approved school system, intermediate unit, or consortium.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may be repeated for additional credit.

**SPSY 9999. Doctoral Dissertation. 1 to 6 Credit Hour.**

Registration limited to candidates for the doctorate who have successfully completed the minimum number of semester hours required for the degree and the preliminary examination. Continuous registration during the fall and spring terms is required until the dissertation has been completed, successfully defended, and accepted by the Graduate School.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student, School Psy Clinical Clearance.

**Repeatability:** This course may be repeated for additional credit.

## Science Education (Elementary) (SCEE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.



**SCEE 5401. Pre Sch & Elem Sci N-6. 3 Credit Hours.**

This course prepares students to teach the sciences in the elementary and middle grades. This course teaches how to design and teach inquiry-based science lessons that support elementary and middle school students' constructivist learning for deep understanding. Students in this course will practice designing and teaching inquiry-based lessons. They will experience inquiry-based science lessons and laboratories first-hand. This will familiarize them with the instructional approach and teach them specific science. They will also learn to review video and other resources to determine elementary and middle school students' misconceptions about the same science. Students in this course will practice integrate all this information as they design and teach inquiry-based lessons on e.g. energy, body systems, the seasons, density, and the water cycle. For their final project, students will research, design, and teach an inquiry-based lesson on a science topic of their own choosing. Learning how to manage the inquiry-based science classroom will be emphasized throughout the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Science Education (Secondary) (SCES)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SCES 5415. Tchgs Sci Sec Sch Tchrs. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SCES 5713. L&T Hi Sch Bio/Phys/Chem. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SCES 5714. L&T Mid Sch Bio/Phy/Chem. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SCES 8726. Demonstrations in Sci. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SCES 8727. Critical Iss in Math/Sci. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SCES 8728. Curr Pract in Math/Sci. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SCES 9782. Special Projects. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Science, Secondary Education (SCSE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SCSE 8765. Lab Exper Rel Hist Sci. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Secondary Education (SECE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **SECE 5471. Literacy and Differentiation in the Academic Areas, 7-12. 3 Credit Hours.**

This course examines ways in which secondary teachers can support all students' development of the complex literate knowledge, strategies, and practices required to achieve deep understandings of essential concepts and skills in an academic or vocational area. The course conceptualizes academic literacies broadly to include written, spoken, graphic, and visual "texts" used both as objects of instruction and supports for learning. Taking a "back-to-front" approach to curriculum design, students develop instructional activities to enable learning of specialized vocabularies, as well as reading and writing in various genres and modes. They learn to differentiate those activities so as to address differences in student backgrounds, interests, language use, learning preferences, and background knowledge.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Social and Behavioral Sciences (SBS)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **SBS 5001. Fundamentals of Public Health. 3 Credit Hours.**

This course encompasses historical and sociocultural approaches to understanding public health and bioethics. Emphasis is on understanding public health systems from the dawn of history to the 21st century and the evolution of bioethical issues including the application of bioethical principles, regulations, and strategies in research and health practice. This seminar emphasizes the integration of conceptual and experiential learning. This is reflected in the course design and in teaching and learning processes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

### **SBS 5002. Program Planning, Theory, and Practice. 3 Credit Hours.**

Program Planning, Theory, and Practice is a core course in the MPH curriculum that includes content critical to the development of public health practitioners and researchers. It covers all aspects of the public health program planning cycle: (1) the identification of community stakeholders and conducting needs assessments; (2) using scientific literature and best practices to inform program development; and (3) implementation and evaluation of community programs. The course will introduce major models of human health behavior and use theory and evidence to guide students as they develop a public health program. Final program proposals include measurable goals and objectives, activities, and an evaluation plan, with a focus on cultural competence and tailoring to meet the needs of the community. Upon completion of the course, students will have the tools to design and evaluate public health programs in the community.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **SBS 5004. Understanding Stress and Change. 3 Credit Hours.**

This course focuses on the impact of stress on physical and emotional health and quality of life. It focuses on the causes, types, and physiology of stress and stress reduction methods, including relaxation, biofeedback, fear control, cognitive restructuring, and social psychological interventions in community settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **SBS 5008. Global Health: People, Planet, Place. 3 Credit Hours.**

This course introduces students to key global health concepts related to population health, environmental health, maternal and child health, emerging infectious diseases, communicable diseases, and chronic diseases. Throughout the course students will explore commonalities and differences in disease burden between global regions. The global burden of disease will be examined through the lens of social, political, and economic determinants. The course will feature case studies of current global health challenges through course activities, assignments, videos, and readings to provide a real-world context. Global health experts will be featured to share their stories, experiences, and lessons learned from the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 5009. Risk Communication and Public Health. 3 Credit Hours.**

The goal of this course is to demonstrate how health communication professionals can create and implement risk communication plans related to either possible or actual public health hazards (anything that can cause morbidity or mortality). This course focuses on risk communication within the context of terrorism, infectious disease outbreaks, and health problems that occur because of natural disasters. It will include core principles of risk communication, examine special challenges of risk communication with diverse audiences, and prepare students to create a crisis and emergency risk communication plan.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 5015. Public Health Nutrition. 3 Credit Hours.**

This seminar course explores nutrition as a science and platform for public health promotion and disease prevention. The fundamental contribution of nutrition to public health as well as the potential of food and nutrition policy, programs, and interventions to reduce risk and promote health are examined.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 5102. Theoretical Foundations of Health Behavior. 3 Credit Hours.**

Theories of decision-making related to health behavior. Emphasis on the dynamic interaction of attitudes, values, situational factors and other factors that influence health promoting and health damaging behavior.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 5105. Maternal and Child Health. 3 Credit Hours.**

This seminar on maternal and child health (MCH) focuses on health problems and diseases affecting pregnant and postpartum women and their children from the individual, community, and national perspectives. The course highlights the impact of common health problems and their functional outcomes in terms of morbidity, mortality, psychological well being, reproduction and growth. Students will examine social, behavioral, systems and broader population determinants of maternal and childhood diseases, as well as interventions and programs designed to address MCH problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 5500. Seminar in Current Issues in Public Health. 3 Credit Hours.**

Seminar topics rotate to address current issues in public health research, policy and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may be repeated for additional credit.

**SBS 8001. Research Methods in Public Health. 3 Credit Hours.**

This course provides fundamental graduate-level research methods training germane to the social and behavioral sciences. Students will examine how to formulate research problem statements and hypotheses, select appropriate and sound methods for data collection, and critically evaluate research designs in social and behavioral science research. It concentrates on fundamental concepts in research design and measurement that help prepare students to plan and implement theoretically-informed and methodologically-sound scientific studies and to critically evaluate and discuss social and behavioral science research. The course emphasizes ethical and practical methods of studying and evaluating causal relations (efficacy and internal validity); determining generalizability of observations (effectiveness, external and ecological validity); and accurate and reliable measurement and conceptualization of variables (construct validity).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (SBS 5002 or SBS 5102), EPBI 5002 (may be taken concurrently), and (EPBI 5201 (may be taken concurrently) or EPBI 5101 (may be taken concurrently))

**SBS 8005. Health Promotion in Vulnerable Populations. 3 Credit Hours.**

Health inequities - unequal, unfair, and preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health experienced by vulnerable populations - are well documented in the United States. This course will review, critically appraise and discuss theory and research on the physical, mental, and social vulnerabilities contributing to the poor health of subgroups of the American populace, with a focus on challenges and approaches to engaging hard-to-reach populations in intervention research aimed at improving health outcomes. Specifically, this course will cover theoretical frameworks, methodological and recruitment challenges and strategies, approaches to intervening at the individual, community, and system levels, and approaches to developing and adapting interventions. Students will develop a deep understanding of the potential causes of and solutions to health inequities in the US.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 8006. Addictions and Dependencies. 3 Credit Hours.**

This graduate level course explores current narratives and policies around substance use, dependency and addiction using a public health lens incorporating compassion, person first framing and harm reduction along the continuum of prevention, treatment, and recovery for persons experiencing chaotic drug use. Students will engage with current and seminal texts across multiple platforms, e.g., investigative journalism, peer reviewed journals, book chapters, podcasts, videos and lecture and delve into hot topics in the substance use landscape. Assignments may include student made content videos, program critiques, persuasive essays and policy reviews.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 8009. Health Psychology. 3 Credit Hours.**

Through class lecture, readings, and discussions, students will learn how characteristics of persons (e.g., personality, behavior, coping, and biological reactivity) and their environments (e.g., stress and social support) influence health outcomes at the individual and population level. In addition, the course examines the potential of health psychology to explain population-level health problems and to ameliorate public health problems through behavioral and community-based interventions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health, Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 8018. Obesity: From Genes to Junk Food. 3 Credit Hours.**

The course will broadly explore the etiology, treatment, and prevention of obesity from a multilevel systems perspective. Genetic, epigenetic, physiological, and psycho-social influences will be considered at the level of the individual. These influences will also be considered within family, school, and work-site contexts. Macro-level influences include government policies and programs, media, food industry influences, and community resources. Critical thinking skills and scholarly exchange will be emphasized through classroom discussion and weekly presentations/critiques of emerging science in each topic area.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101, PBHL 5101, EPBI 5201, or PBHL 5201)

**SBS 8105. Health Communication. 3 Credit Hours.**

This course examines multiple communication levels, channels, media, and communication technologies as they relate to developing and implementing public health communication interventions. Levels of communication processes and effects in the following will be covered: 1) intrapersonal health communication related to personality, attitudes, cognitive style, and culture; 2) interpersonal communication in the patient-caregiver relationship including communication style, decision making, and dynamics of stress and conflict; 3) mass communication processes including media campaigns and social marketing to promote good health and disease prevention; and 4) risk and crisis communication across settings and strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SBS 8111. Public Health Program Planning. 3 Credit Hours.**

This course covers program planning in public health practice. It analyzes national health objectives and their applications at the state and community levels. One emphasis is on program planning as a change strategy to alter knowledge, attitudes, and health behavior to achieve positive health outcomes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EPBI 5101 (may be taken concurrently), PBHL 5101 (may be taken concurrently), EPBI 5201 (may be taken concurrently), or PBHL 5201 (may be taken concurrently)), (EPBI 5002 (may be taken concurrently) or PBHL 5002 (may be taken concurrently)), and (SBS 5102 (may be taken concurrently) or PBHL 5102 (may be taken concurrently))

**SBS 8112. Creating Novel Interventions in Public Health. 3 Credit Hours.**

This course is a core course in the PhD in Social and Behavioral Sciences curriculum and an elective available to MPH and other graduate students in the College of Public Health. This course will guide students' efforts to build a stronger foundational knowledge of empirical evidence about a public health problem, and to synthesize that evidence with public health theories and principles of behavior change to understand how to improve strategies to address the problem. Students will use inductive strategies and deductive logic to develop and defend conceptual models that (a) represent risk and protective factors influencing a chosen problem and (b) exemplify the potential efficacy of an intervention strategy that either highlights current state-of-art practice (masters students) or that advances (doctoral students) the current state-of-art approaches to that problem. The culmination of sequential assignments includes student presentations highlighting current public health challenges in their topical areas and a testable intervention strategy framed conceptually by health behavior theory. Students are expected to prepare for each class and participate actively. Note: Prior to fall 2023, the course title was "Concepts and Methods to Improve Public Health Interventions."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (SBS 8009 or SBS 5002)

**SBS 9083. Readings and Conference in Public Health. 1 to 3 Credit Hour.**

This is an advanced tutorial in public health with an appropriate faculty member. Note: Registration requires a written contract with the supervising faculty member and approval of the student's advisor and of the Director of Graduate Programs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SBS 9289. MPH Fieldwork I. 3 Credit Hours.**

This course entails a fieldwork project or internship in a public health agency. It includes seminars, oral and written reports of progress, and joint supervision by a preceptor and faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in EPBI 5101, HPM 5006, SBS 5001, (SBS 5002 or SBS 5102), and (EPBI 5006 or (EPBI 5002 and EPBI 5005))

**SBS 9291. Dietetics Experiential Learning. 3 Credit Hours.**

Students will complete three assignments that draw on their experiences in the clinical and food service setting and present their work to the class. In addition, students will participate in journal clubs and role play activities that help develop management and ethical practice skills. Preceptors will evaluate the application of these skills in a real life setting and provide feedback that does not impact the student's grade. This course will give students the space to reflect on their experiences, and tie academic learning to experiential learning and learn from each other.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SBS 5214 and SBS 5211.

**SBS 9389. MPH Fieldwork II. 3 Credit Hours.**

This course is an evaluation of the fieldwork project or internship using a full range of research methodologies. Data are collected, analyzed, and reported in a comprehensive final report. Oral and/or poster presentations are presented to public health organizations. The course includes a final oral defense of the project or internship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SBS 9289, (SBS 5002 or SBS 5102), ((EPBI 5002 and EPBI 5005) or EPBI 5006), and (EPBI 5201 or EPBI 5101)

**SBS 9994. Preliminary Examinations. 1 Credit Hour.**

This course supports preparation for taking the preliminary examinations in the Health Policy and Social and Behavioral Sciences Ph.D. programs. To enroll, students must have completed all required coursework for the Ph.D. and obtain the approval of the Ph.D. Program Director. Students must be enrolled to take the required preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SBS 9998. Dissertation Proposal Research. 2 Credit Hours.**

This course supports preparation of the dissertation proposal. The course is required for students who have passed the preliminary examinations for their PhD program and who have not yet defended the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Doctor of Philosophy.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in SBS 9994.

**SBS 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is limited to Ph.D. candidates who have completed and defended a dissertation proposal that is filed with the Graduate School by the last day to add a course in the semester. Continuous registration in 9999 fall and spring is required until the dissertation is successfully defended.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Social Studies Education (Elementary) (SSEE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SSEE 5451. Tchg Social Stds N:6. 3 Credit Hours.**

This course is available for students interested in becoming eligible for certification at the N-6 level. Content covered includes teaching strategies for social studies for elementary school children that address geography, civics history, and economics. A special project is required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSEE 8763. Curriculum in Social Studies. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Social Studies Education (Secondary) (SSES)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SSES 5465. Meth & MatrIs Sec Soc St. 3 Credit Hours.**

This course is available for students interested in becoming eligible for certification at the 7-12 level in social studies. Content covered includes theoretical propositions underlying pedagogical approaches; issues in diversity and social justice in the classroom; and instructional materials and teaching strategies for secondary social studies. A special project is required. Contact a social studies adviser for further information.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSES 5466. Teaching for Understanding in Secondary Social Studies. 3 Credit Hours.**

This course focuses on applied social studies methods; the course objectives are (1) that pre-service social studies teachers will learn about the rich resources found at museums, archives, and historic sites and (2) that they will have an opportunity to apply what they have learned in the program to developing curricular materials. There is a required field experience for which students are placed at Philadelphia area cultural institutions. Students will be developing collections and curriculum materials for schools and teachers in general and for National History Day. Class time will be devoted to strengthening and supporting the field experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (EDUC 5402 and EDUC 5605)

## **Social Work (Graduate) (SSWG)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SSWG 5000. Special Topics in Social Work. 1 to 3 Credit Hour.**

Topics vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SSWG 5003. Foundations in Social Work Research. 3 Credit Hours.**

This is the foundation course in research methods in the MSW program. This course provides graduate social work students with a basic understanding of social work research methods. The philosophy of traditional scientific inquiry will be presented along with a postmodern orientation to knowledge building. Students will learn quantitative deductive and qualitative inductive approaches to empirical study of social work problems. Critical thinking about knowledge, values and ethics regarding problem formulation, research methods and use of findings, and research skills as they relate to social work will be emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 5005. Social Welfare Policies and Services I. 3 Credit Hours.**

This is an introduction to American social welfare policies and social service programs in their historical, political, economic, and social context. Methods of social problem analysis and the social work profession as a social institution are covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 5006. Social Welfare Policies and Services II. 3 Credit Hours.**

This course builds on SSWG 5005 and covers methods of social policy analysis and advocacy in the public policy arena, including skills in argumentation and lobbying.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (SSWG 5005 or 'Y' in SW05)

**SSWG 5007. Deconstructing White Supremacy in Social Work. 3 Credit Hours.**

Using the School of Social Work's mission of "societal transformation" as a springboard, this course explores a critical aspect of being a social worker: becoming an agent of social change. The course focuses on the ideology of white dominant culture and white supremacy as a structural and systemic problem to be acknowledged and dismantled within the field of social work as a starting place before responding in equitable and anti-oppressive ways to societal and global issues. Attention is paid to core social work ethics and values, understanding how identity and lived experiences shape social work, and facilitating working with others. The advancement of anti-oppressive frameworks, on micro, mezzo and macro and global levels of practice is addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Social Work.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 5101. Theory-Informed Direct Practice I: Individuals, Families, and Groups. 3 Credit Hours.**

This is the first of two courses focused on theory-informed social work direct practice with individuals and families. This course emphasizes how our theoretical knowledge base of human behavior and human development (within the context of the social environment) impacts our engagement with and assessment of individuals. The course begins with an exploration of the role of human behavior theory, its limitations and strengths, and proceeds to provide knowledge of human development and human behavior throughout the life course from a person-in-environment perspective. Interrelationships among biological, psychological, social, and cultural systems (as they affect, and are affected by, human behavior) are studied using a number of interdisciplinary theoretical approaches, including knowledge about how exposure to trauma impacts human development. We then apply this knowledge through experiential learning to our practice with individuals, integrating tenets of Motivational Interviewing, trauma-informed practice, and anti-oppressive practice to develop a rapport with individuals and complete a comprehensive bio-psycho-social-spiritual assessment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (SSWG 5005 (may be taken concurrently) or 'Y' in SW05) and SSWG 5007 (may be taken concurrently)

**SSWG 5102. Theory-Informed Direct Practice II: Individuals, Families, and Groups. 3 Credit Hours.**

This is the second of two courses focused on theory-informed direct social work practice with individuals and families. This course emphasizes how our theoretical knowledge-base of human behavior and human development (within the context of the social environment) impacts our interventions with individuals and families. This course emphasizes theories related to family development, integrating knowledge of the impact of trauma on families, with a critical discussion about its limitations and strengths. Interrelationships among biological, psychological, social, and cultural systems (as they affect and are affected by human behavior) are studied using a number of interdisciplinary theoretical approaches. We then apply this knowledge to our practice with individuals and families, through experiential role plays, continuing to use the tenets and skills of trauma-informed practice, anti-oppressive practice, and Motivational Interviewing as a foundation of our work. We will critically assess a series of interventions for our work with individuals and families using evidence-based practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 5101, (SSWG 5003 (may be taken concurrently), EPBI 5101 (may be taken concurrently), or 'Y' in SW03), and (SSWG 5006 (may be taken concurrently) or 'Y' in SW06)

**SSWG 5103. Theory-Informed Macro Practice I: Groups, Organizations, and Communities. 3 Credit Hours.**

This is the first of two foundation courses that focus on macro social work. Macro social work is concerned with collective interventions in and with group, organization, and community systems. This course emphasizes the theories and practice skills necessary for understanding, assessing, designing, and planning interventions of change in macro systems. Students apply theory during experiential learning opportunities. Particular attention is paid to the dynamics of multiculturalism, using a trauma/resiliency-informed lens and an anti-oppressive framework to identify and evaluate culturally-appropriate, evidence-based macro interventions. Promising practice examples from macro social work will illustrate how to bring about societal transformation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (SSWG 5005 (may be taken concurrently) or 'Y' in SW05) and SSWG 5007 (may be taken concurrently)



**SSWG 5104. Theory-Informed Macro Practice II: Groups, Organizations, and Communities. 3 Credit Hours.**

This is the second of two foundation courses that focus on macro social work. Macro social work is concerned with collective interventions with group, organization, and community systems. This course emphasizes the theories and practice skills necessary for implementing, monitoring, and evaluating planned macro interventions. Students apply theory during experiential learning opportunities. Particular attention is paid to the dynamics of multiculturalism, using a trauma/resiliency-informed lens and an anti-oppressive framework to identify and evaluate culturally-appropriate, evidence-based macro interventions. Promising practice examples from macro social work will illustrate how to bring about societal transformation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 5103, (SSWG 5003 (may be taken concurrently), EPBI 5101 (may be taken concurrently), or 'Y' in SW03), and (SSWG 5006 (may be taken concurrently) or 'Y' in SW06)

**SSWG 5108. Practice of Social Service Delivery II. 3 Credit Hours.**

This course builds on SSWG 5107 by focusing on refinement of and competence in generalist social work practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in SSWG 5107, SSWG 5002 (may be taken concurrently), (SSWG 5006 (may be taken concurrently) or 'Y' in SW06), and (SSWG 5003 (may be taken concurrently) or 'Y' in SW03)

**SSWG 5187. Foundation Field Practicum I. 3 Credit Hours.**

For the first semester of the foundation-year field practicum, the student works within a generalist social work framework to develop basic competencies in key knowledge, skill, and affect arenas. This generalist framework includes a broad range of knowledge and skills; theories and models; practice at the micro, mezzo, and macro levels; performance in numerous social work roles; and understanding the various fields of practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in SSWG 5007 (may be taken concurrently), (SSWG 5005 (may be taken concurrently) or 'Y' in SW05), and ((SSWG 5001 (may be taken concurrently) and SSWG 5107 (may be taken concurrently)) or (SSWG 5101 (may be taken concurrently) and SSWG 5103 (may be taken concurrently)))

**SSWG 5188. Foundation Field Practicum II. 3 Credit Hours.**

This course continues SSWG 5187 as the foundation-year field practicum taken in the second semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- (except where noted) in SSWG 5187 (P or higher), (SSWG 5006 (may be taken concurrently) or 'Y' in SW06), (SSWG 5003 (may be taken concurrently) or 'Y' in SW03), and ((SSWG 5002 (may be taken concurrently) and SSWG 5108 (may be taken concurrently)) or (SSWG 5102 (may be taken concurrently) and SSWG 5104 (may be taken concurrently)))

**SSWG 5302. Critical Thinking for Societal Transformation. 1.5 Credit Hour.**

This course focuses on the development of critical thinking skills essential for social work practice focused on societal transformation. In contrast to undergraduate education in social work (that emphasizes descriptive writing, memory recall, and basic interpretation of data and conclusions), this course stresses critical analysis. This course prioritizes the following: weighing and considering the meaning and significance of claims; creative and innovative thinking; problem solving; logical reasoning; and evaluating and synthesizing research and theory. This course is essential to ensure that students, capable in generalist social work practice, will be primed to enter a graduate curriculum that emphasizes social justice and, as such, requires innovative thinking and skill acquisition in a concentrated social work method as well as in a specialized area of study.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 5309. Societal Responses to Aging. 3 Credit Hours.**

This course explores public and private resources, the need for social and political action, and the network of services required to meet the needs of individuals and their families. It presents policies and practice in income maintenance, health, housing, safety, and social status. Public-private sponsorship, cost, accountability, benefit levels, and administration are discussed. Student social action projects are completed and expanded.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in (SSWG 5005 or 'Y' in SW05)

**SSWG 8000. Special Topics in Social Work. 1 to 3 Credit Hour.**

Topics vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SSWG 8010. Special Topics in Social Work. 1 to 3 Credit Hour.**

Topics vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SSWG 8101. Clinical Practice with Individuals, Families, and Groups I. 3 Credit Hours.**

This advanced practice course for students in the Clinical concentration is the first course in a year-long sequence of two courses that comprise the clinical concentration practice curriculum. Students learn guidelines for evidence-based practice and develop a multicultural perspective of clinical social work practice with individuals, families, and groups. The course provides more depth and breadth in the evidence base for selection of effective theoretical frameworks that support collaborative interventions with vulnerable and diverse populations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- (except where noted) in (SSWG 5302, Complete the following: SSWG 5001, SSWG 5002, (SSWG 5003 or 'Y' in SW03), SSWG 5107, SSWG 5108, and SSWG 5188 (P or higher), or Complete the following: (SSWG 5003 or 'Y' in SW03), SSWG 5101, SSWG 5102, SSWG 5103, SSWG 5104, and SSWG 5188 (P or higher))

**SSWG 8102. Clinical Practice with Individuals, Families, and Groups II. 3 Credit Hours.**

This course continues to develop advanced practice skills and knowledge with individuals, families, and groups as undertaken in SSWG 8101. Students further develop self-awareness, use of self, and recognition of feelings evoked in relation to the helping process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8101.

**SSWG 8107. Macro Practice in Organizational, Community and Policy Arenas. 3 Credit Hours.**

This course prepares students in the Macro Concentration for advanced work in human service and social change organizations, geographic and identity-based communities, and policy arenas. Students will acquire knowledge and skills to be change agents within organizations and contribute to creating the requisite social, political, and economic conditions to help communities and constituencies meet their needs and achieve their full potential. The course will cover nature and characteristics of public, private and nonprofit organizations, community dynamics, policy practices and processes, organizing, planning, collaborations, development and sustainability, inclusivity and diversity, use of research to inform practice, ethics and professional development. Knowledge and skill competencies, as identified by the social work profession, inform the design of the course. Note: The course is for MSW students who have selected the Macro Concentration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- (except where noted) in (SSWG 5302, Complete the following: SSWG 5001, SSWG 5002, (SSWG 5003 or 'Y' in SW03), SSWG 5107, SSWG 5108, and SSWG 5188 (P or higher), or Complete the following: (SSWG 5003 or 'Y' in SW03), SSWG 5101, SSWG 5102, SSWG 5103, SSWG 5104, and SSWG 5188 (P or higher))

**SSWG 8109. Social Innovation and Entrepreneurship. 1 Credit Hour.**

Social Innovation has been a defining characteristic of the social work profession from its earliest days. Mary Richmond's early casework assessment tools, community organizing and economic development efforts, social entrepreneurship and philanthropic initiatives as well as anti-racism/anti-oppression/anti-violence interventions are just a few of the change-oriented contributions made by social workers. This five-week, one-credit course is intended to further encourage students to see themselves as innovators who can make their vision for positive social transformation a reality. The course offers students a substantive grounding in social entrepreneurship (SE) and social innovation. It presents SE's history, context, diversity of applications, as well as the increasing regard for SE as a tool to transform the current corporate economy to an ecological and equitable one. The course provides a space for students to reflect and raise questions about how they might like to use their skills to make a difference in the world through social entrepreneurship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8107.

**SSWG 8111. Legislative Advocacy. 1 Credit Hour.**

Building on foundational knowledge of policy issues, and SSWG 8107 (Macro Practice), this one-credit course provides students with the advanced skills necessary to undertake legislative advocacy. Students will review tactics for legislative advocacy for social justice and human rights. A range of tactics and techniques used in defining issues and assessing policy conditions will be taught. Students will also learn about regulations and how to advocate for regulations that yield the best outcomes for vulnerable groups. Students will develop and implement a legislative advocacy campaign as a policy practice project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8107.

**SSWG 8112. Coalitions and Partnerships. 1 Credit Hour.**

In this one-credit course, students will become familiar with key strategies for building partnerships and coalitions, by building upon community issues already identified in Macro Practice and foundations human behavior course. Students will explore strategies that mobilize and leverage community support services and incorporate diverse community perspectives. Topics include collaborative leadership, coalition development, developing a constituency/partnership, team building, and advocacy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8107.

**SSWG 8113. Resource and Grant Development for Human Services. 1 Credit Hour.**

In today's society, financial resources for human services are severely limited and public demand for greater accountability on the part of agencies is growing. Administrators, managers and supervisors of human services and non-profit agencies are seeking to become more knowledgeable and skillful in resource development. This 1-credit course is designed to respond to that need by preparing students to use resource acquisition as a key tool for accomplishing the objectives of their future organizations of employment. This course focuses on resource acquisition (fund raising, campaigns, use of grants, and entrepreneurial options).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8107.

**SSWG 8114. Supervision, Staff Management, and Staff Development in Human Service Organizations. 1 Credit Hour.**

In this 1-credit course, students will examine roles and the range of issues that encompass supervision in organizational contexts, including management and development of personnel. Students will gain practical information and tools to assist them as they function as social work supervisors, managers, administrators, and executives in human service organizations. Students will examine social work supervision from historical, theoretical and applied perspectives, with particular emphasis on challenges, ethical issues, and solution-focused techniques in administrative, educational and supportive supervision.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8107.

**SSWG 8115. Leadership in Human Service and Social Change Organizations. 1 Credit Hour.**

This 1-credit course will increase understanding of leadership at the personal, interpersonal, team, and organizational levels, and will prepare students for assuming leadership roles in human service and social change delivery organizations. It is critical for students to have the capacity to lead from wherever they sit in the organization, as practitioners, coordinators, managers, supervisors, or executives, and that they develop an effective style of leadership and acquire the competence, skills and knowledge necessary to assist in leading human service and social change organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8107.

**SSWG 8116. Grassroots Mobilization: In the US and Internationally. 1 Credit Hour.**

This one-credit course on grassroots mobilization will build on the content from SSWG 8107 (Macro Practice). It will cover the theoretical and skill-based underpinnings of organizing with the grassroots to create increased social and economic justice. Social, economic and political reforms around the world often begin when those who are most vulnerable organize to enact positive change for themselves and others in their communities. The empowerment of these groups can lead to sweeping social, political and economic changes. As social workers, we must use our skills to create and become a part of these grassroots movements in order to fulfill the mission and the ethics of our profession.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 8107.

**SSWG 8187. Advanced Field Practicum I. 3 Credit Hours.**

This advanced year practicum for service delivery builds competencies in the Clinical concentration, Management and Planning concentration, or Communities and Policy Arenas concentration, and by selected specialization. This is the first semester (fall) of a two-semester internship in which the student gains greater depth in knowledge and skills for her or his choice of concentration, and increased familiarity with a chosen field of practice (specialization).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (SSWG 5302, SSWG 8101 (may be taken concurrently), or SSWG 8107 (may be taken concurrently))

**SSWG 8188. Advanced Field Practicum II. 3 Credit Hours.**

This advanced year practicum for service delivery builds on SSWG 8187. This is the second semester course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- (except where noted) in SSWG 8187 (P or higher) and ((SSWG 8101, SSWG 8102 (may be taken concurrently), and SSWG 8205 (may be taken concurrently)) or (SSWG 8107, SSWG 8207 (may be taken concurrently), and Complete 1 of the following: (SSWG 8109 (may be taken concurrently), SSWG 8111 (may be taken concurrently), SSWG 8112 (may be taken concurrently), SSWG 8113 (may be taken concurrently), SSWG 8114 (may be taken concurrently), SSWG 8115 (may be taken concurrently), or SSWG 8116 (may be taken concurrently))))

**SSWG 8205. Evaluation of Clinical Practice. 3 Credit Hours.**

This is a required advanced-level research course for students in the Clinical concentration. It provides students with tools of practice evaluation and learning experiences of formal evaluation of student's individual work with individuals, families, and groups. It also reviews methods of evaluation of direct practice at both individual and program levels.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- (except where noted) in (Complete the following: (SSWG 5003, EPBI 5101, or 'Y' in SW03) and SSWG 5188 (P or higher) or SSWG 5302) and SSWG 8101 (may be taken concurrently)

**SSWG 8207. Social Work Research: Communities and Policy Arenas and Management/Planning. 3 Credit Hours.**

This is a required advanced-level research course for students in the Management and Planning and Communities and Policy Arenas concentrations. It focuses on the history and philosophies, conceptual approaches, techniques and methods, and issues in practice and utilization of research applied to communities, organizations, social programs, and policies. It provides students with the skills to carry out research designed to support human rights through community and/or policy assessment, planning, and intervention.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- (except where noted) in (Complete the following: (SSWG 5003, EPBI 5101, or 'Y' in SW03) and SSWG 5188 (P or higher) or SSWG 5302) and SSWG 8107 (may be taken concurrently)

**SSWG 8303. Dynamics of Health, Health Care, and Health Systems. 3 Credit Hours.**

This advanced year graduate course focuses on Human Behavior in the Social Environment (HBSE) content relevant to health and mental health social work practice at all systems levels. Students study the effects of bio-psycho-social, familial, organizational, economic, and cultural variables on the definition, incidence, prevalence, experience, treatment, and prevention of chronic and acute conditions, particularly those prevalent among oppressed populations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ((SSWG 5001 and SSWG 5002), (SSWG 5101 and SSWG 5103), SSWG 5301, or SSWG 5302)

**SSWG 8307. Health/Mental Health Policy. 3 Credit Hours.**

This advanced-level policy course is for students in the Health/Mental Health Policy specialization. This course examines historical and current issues in health/mental health policy, including the U.S. health care system (e.g., managed care, Medicare, and Medicaid) as well as international comparisons. Insurance, access to care, and differential health/mental health outcomes are studied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ((SSWG 5005 and SSWG 5006), SSWG 5301, SSWG 5302, ('Y' in SW05 and 'Y' in SW06), (SSWG 5005 and 'Y' in SW06), or (SSWG 5006 and 'Y' in SW05))

**SSWG 8403. Children and Families in the Social Environment. 3 Credit Hours.**

This advanced year graduate course is designed to develop students' understanding of children within the context of families and other socializing institutions. Children and families are viewed from an ecological and systems perspective, i.e., in the context of families, communities, schools, and organizations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ((SSWG 5001 and SSWG 5002), (SSWG 5101 and SSWG 5103), SSWG 5301, or SSWG 5302)

**SSWG 8407. Policy on Families and Children. 3 Credit Hours.**

This is an advanced-level policy course for students in the Children and Families specialization. It offers an overview of policies that impact families, children, and youth in the United States. These three policy areas, although distinct, are integrally related. The challenge of creating effective social policies for families, children, and youth is the focus of this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ((SSWG 5005 and SSWG 5006), SSWG 5301, SSWG 5302, ('Y' in SW05 and 'Y' in SW06), (SSWG 5005 and 'Y' in SW06), or (SSWG 5006 and 'Y' in SW05))

**SSWG 8503. Military Culture: The Service Member, Veteran and Family in the Social Environment. 3 Credit Hours.**

This course intends to provide students with a learning experience that provides a foundation of theory, skills, and knowledge necessary in the practice of military social work. Social work practice with the military, not unlike other facets of social work practice, must keep in mind the unique culture of the individual within the context of their unique environment and history. Learning modules include military culture, the military family, military children, female warriors and veterans, and clinical assessment and treatment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C (except where noted) in (SSWG 5002 or SSWG 5301 (B- or higher))

**SSWG 8504. Integrative Seminar. 3 Credit Hours.**

This course provides an opportunity for students, individually and in teams, to identify and critically examine major ethical/legal as well as practical concerns facing the profession. The course is designed to enhance self-awareness and self-confidence through the integration of knowledge, skills, and values learned throughout the M.S.W. program. Note: Students must take this course in the last semester of the M.S.W. Program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- (except where noted) in (SSWG 8101 or SSWG 8107), (SSWG 8205 (may be taken concurrently) or SSWG 8207 (may be taken concurrently)), SSWG 8187 (P or higher), and SSWG 8188 (P or higher; may be taken concurrently)

**SSWG 8505. Advanced Social Justice: Anti-Oppressive Social Work. 3 Credit Hours.**

Advanced Social Justice: Anti-Oppressive Social Work is an advanced-year course focused on explicitly identifying solutions and actionable processes for addressing forms of oppression. This course provides course participants with the opportunity to engage in critical self-awareness that is essential to creating sustainable change. Participation in this course will lead to refined and actionable skills in awareness and engagement in anti-oppressive practices. This course combines theory and practice skills applicable to all forms of social work practice by utilizing an ecological perspective, considering interpersonal skills, and advocacy. This course focuses on the development of the practitioner, increasing inclusive practices applicable to the diversity of pathways occupied by the social work professional. Advanced Social Justice: Anti-Oppressive Social Work is designed to solidify concepts from Social Justice: Foundation for Transformative Social Work (SSWG 5007), which is offered in the foundation-year of the MSW program. Anti-Oppressive Social Work focuses on solidifying anti-oppressive skills via critical self-reflection and increasing social awareness. Critical race theory, ecological perspective, and intersectionality are foundational theories to the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- (except where noted) in SSWG 8188 (P or higher; may be taken concurrently) and (SSWG 5007 or SSWG 5302)

**SSWG 8507. Military Health Care, Policy and Community Response. 3 Credit Hours.**

The purpose of the course is to introduce students to the arena of social policy analysis, policy practice, and advocacy as related to social work practice with the military.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Social Work.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C (except where noted) in (SSWG 5006, SSWG 5301 (B- or higher), or 'Y' in SW06)

**SSWG 8603. Advanced Human Behavior and the Social Environment - Gender and Sexuality through the Lifespan. 3 Credit Hours.**

Sexual wellness is a key component of human wellness. The World Health Organization states "sexual health is influenced by a complex web of biological and social factors. It requires a positive, responsible approach to sexuality and sexual relationships as well as pleasurable, safe sexual experiences that are free from coercion, discrimination, or violence." Taking a human behavior, social environment, and biopsychosocial approach to gender and sexuality, this course is designed to increase the student's comfort and sensitivity to the diversity of sexual issues people face and the normative spectrum of behavior and identity that exists. The course will explore the diversity of human sexuality; paying specific attention to the roles that gender, race, class, sexual orientation, religion/spirituality, and ethnicity have on sexuality. Sexual violence will be examined on both macro and micro levels with emphasis on human rights and social justice aspects of vulnerable populations. Sexual concerns of clients will be examined in a variety of practice settings such as case management, counseling, health care, schools, and child welfare. A variety of sexuality related topics will be covered including sex through the life span, diagnostic interviewing, disability and illness, reproductive justice, sexual wellness, sexuality education, and sexual diversity. All materials will be taught using the framework of NASW's Code of Ethics for social workers dealing with sexually related matters.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ((SSWG 5001 and SSWG 5002), (SSWG 5101 and SSWG 5103), or SSWG 5302)

**SSWG 8607. Advanced Policy - Gender and Sexuality. 3 Credit Hours.**

This advanced level course focuses on the arena of social policy analysis, policy practice, and advocacy as related to gender and sexuality. Specific focus will be on evaluating how class, race, religion, and immigration status interact with gender and sexuality to impact policy, services, and outcomes for client populations. Policies at the national and international level, the state and local level, and at the agency and organization level will be examined. Students will identify how these policies can affect client populations and macro, mezzo, and micro practice. A major goal of the course is to provide students with knowledge and skills to influence the development, implementation, and evaluation of policies that relate to gender and sexuality.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ((SSWG 5005 and SSWG 5006), SSWG 5301, SSWG 5302, ('Y' in SW05 and 'Y' in SW06), (SSWG 5005 and 'Y' in SW06), or (SSWG 5006 and 'Y' in SW05))

**SSWG 8801. Financial Management. 3 Credit Hours.**

In a global society for human service management, financial resources are competitive and limited. Moreover, the funders (government, private corporations, and the public) demand greater accountability on the part of agencies. Administrators of social work organizations need to become knowledgeable and skillful as fiscal and program managers. This course is designed to prepare students to use resource acquisition as well as risk and cost management techniques to become effective administrators. This course is designed to complement and support the administration courses by focusing on the financial management aspects of integrated program planning and budgeting. Topics covered include resource expenditure (budget development, fiscal management, risk management, cost analysis and control, financial and IRS reporting) and resource acquisition (fund raising, capital campaigns, use of grants, performance-based and other services contracting, diversification of income sources, entrepreneurial options). Students develop ethical decision-making practices with regard to resource allocation that enable them to develop a professional sense of accountability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8803. Emotional Disorders in Children and Adolescents. 3 Credit Hours.**

This course studies emotional, social, behavioral, and developmental disorders that are prevalent during childhood. Risk factors, developmental pathways, co-occurring conditions, and effective treatment approaches are studied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8804. Social Work with the Homeless. 3 Credit Hours.**

This course provides a framework for the analysis of social policies and programs related to the social problems of homelessness in the United States. Although the focus of the course is on contemporary issues of homelessness, the approach includes an historical perspective in order to explore the enduring legacy of early interventions and approaches to the relief and social control of marginalized populations. The implications of differing viewpoints and alternative problem definitions for policy and service delivery are considered. The course explores shifts in housing policies. Additionally, employment programs are discussed in some detail to demonstrate their impact on the increasing numbers of Americans who are homeless.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8807. HIV/AIDS and Social Work. 3 Credit Hours.**

This course provides an overview of knowledge, skills, values, and policy issues related to prevention and service delivery with HIV/AIDS infected and affected persons.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8809. Child Welfare Policy. 3 Credit Hours.**

This course provides an overview of social welfare policies affecting children with particular attention to the problems of child abuse and neglect.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8811. Alcohol and Drug Use. 3 Credit Hours.**

This course provides students with current information about alcohol and other substance use. Using ecosystems and family systems frameworks, information is presented regarding the bio-psycho-social impact of alcohol and other substance use on individual and family functioning. Particular attention is given to treatment options and resources for change.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8814. Loss and Grief. 3 Credit Hours.**

This course examines the dynamics of loss and mourning, societal attitudes about death, and cultural variations in dealing with loss.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8815. Law and the Practice of Human Services. 3 Credit Hours.**

This course considers various legal issues as they pertain to the practice of social work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8816. Practice Consultation. 3 Credit Hours.**

This course is offered to students planning a career in clinical social work. It builds on the foundation of Clinical Practice I and II, going further and deeper into the skills of clinical practice. It is designed as a seminar with components of peer and clinical supervision similar to LSWs seeking supervision hours toward LCSW licensure. It covers a wide variety of practice skills addressing client needs as presented in class. As such, the majority of class content will be case driven in accord with case presentations. Students should have a strong theoretical foundation and clinical experience working with clients in a mental health setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8818. Supervision, Staff Development, and Training. 3 Credit Hours.**

This course examines sources of power in organizational hierarchies, alternative formats for organizational development, and supervisory and staff development practices.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8823. Psychodynamics of Race, Class and Culture. 3 Credit Hours.**

This course focuses on psychodynamic dimensions unique to particular cultural and socioeconomic groups and their relationship to social work practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**SSWG 8824. Assessment and the DSM. 3 Credit Hours.**

The focus is on using the DSM-5 as an assessment tool and the implications for social work practice. A bio-psycho-social approach to understanding human behavior is taken.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8826. Aging HBSE. 3 Credit Hours.**

This course provides an overview of the major biological, psychological, and sociological theories used to understand the aging process, in conjunction with the social, emotional, and physical environment. The interrelationship between the aging person, his or her family, and society is explored. Particular attention is given to at-risk and diverse populations such as women, minorities, and the oldest old. This course further examines the pathologies and functional disorders which occur in some populations, in addition to the normative process of aging in today's society.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8827. Aging Policy. 3 Credit Hours.**

This is one of three courses in the Aging Specialization. This course focuses on the major social policies affecting the lives of aging Americans. It provides students with the opportunity to understand and analyze the principal social programs, which have been developed in response to the major issues confronted by America's elderly. Students will explore key policy issues in the areas of work and retirement; income maintenance; housing; health care (including long term care, both institutional and home based); delivery of preventive and acute care in the community; the impact of managed care on the elderly; prescription reimbursement programs; abuse and neglect of the elderly; hospice care; euthanasia; Medicare and Medicaid; nutritional support; mental health issues and other related health care topics; and the needs of selected populations during aging (e.g., chronically mentally ill, developmentally disabled and others experiencing pre-existing chronic health care concerns). All of these issues will be pursued with a focus upon social justice, diversity, and consumer involvement in policy development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8831. Social Transformation. 3 Credit Hours.**

This course is an exploration of social transformation theories and practices in the humanities, sciences, social sciences, and other uncategorized ventures for a different world. Topics selected by students range from art therapy to nonviolent civil disobedience. The course emphasizes participatory learning and practical application in social work settings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SSWG 8832. Wealth, Poverty, and In Between: Implications of Class Identity and Stratification on Social Work. 3 Credit Hours.**

Socioeconomic class is ever-present in social work; yet, rarely is it examined critically as an aspect of one's cultural identity, as a means of categorizing society, and as an underpinning for policy and practice. This course will focus on the construction of class identity, especially as it intersects with other cultural dimensions, the ways in which socio-economic status shapes individual and group opportunities, and how class-based assumptions are made, promoted, and institutionalized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SSWG 5007 and (SSWG 5005 or 'Y' in SW05)

**SSWG 9182. Independent Study. 3 Credit Hours.**

This is an independent course of study in an area of special interest. A faculty facilitator and the student work together to identify the content and design learning opportunities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SSWG 9282. Independent Study. 1 to 4 Credit Hour.**

This is an independent course of study in an area of special interest. A faculty facilitator and the student work together to identify the content and design learning opportunities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SSWG 9817. Clinical Military Practice and the Invisible Wounds of War. 3 Credit Hours.**

Social work practice with the military, not unlike other facets of social work practice, must keep in mind the unique culture of the individual within the context of their environment and history. This course intends to provide students with the knowledge and skills that inform the practice of clinical social work with military service members. Topics include clinical work with military families, women warriors, couples, children, service members, and veterans. Facets of clinical work discussed include various contemporary issues facing the modern military service member including the invisible wounds of war. Learning modules include the signature (invisible) wounds of contemporary conflicts, military sexual trauma, issues of sexuality, female warriors, the military family, military children, and the new warrior.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in SSWG 8503 and SSWG 8507.

## Sociology (SOC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SOC 8011. Logic of Inquiry. 3 Credit Hours.**

This course is an introduction to the logic and methods of social research. We will examine the issues that arise in doing and evaluating both quantitative and qualitative research by reading the sociological literature. We will spend some time on the simple tools, e.g. tables and graphs, needed to summarize research results. However the focus will be on larger issues, namely, how researchers draw conclusions from empirical data, and how we can assess the validity of the conclusions they reach.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8111. Classical Social Theory. 3 Credit Hours.**

This course reviews the main lines of sociological and other "social" thought of the modern times (roughly from the 1660s to our time), paying attention to four basic directions in theorizing: (1) The liberal and "classical economic" theories of John Locke and Adam Smith and the rise of neo-classical (neo-liberal) thinking [rational choice theory and its variations]. (2) The liberal-idealist theory of German philosophy (since Kant) and the "interpretative" and "subjectivist" paradigm of Max Weber [and various neo- and nearly-Weberians]. (3) The "social-structural" ("dialectical" in the old language) theory of Karl Marx and its many offshoots [neo-Marxisms, half-Marxisms (such as "Critical Theory," etc.), post-Marxisms]. (4) The "collectivist" (sociologistic) theory of Emile Durkheim and its contemporary versions ["structuralist" (Blau), "culturalist" and "functionalist" (Parsons), "systems" (Luhmann), or "neo-functionalistic" (Faia, Alexander)].

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8211. Inferential and Multivariate Statistics. 4 Credit Hours.**

This course starts with a review of bivariate statistics and moves quickly into multivariate statistics focusing on multiple regression. The emphasis of this course is on conceptual understanding, interpretation, and application. All major computations are performed using the SPSS computing program. Students are also expected to learn the basic skills for working with large social science data sets, such as the GSS. This course serves as a prerequisite for SOC 9211, which involves the application of the statistical procedures taught in this class to the study of real social issues through secondary data analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8221. Qualitative Methods. 3 Credit Hours.**

This course introduces the assumptions, theories and practices of qualitative research methods. The course is designed to provide opportunities for developing specific qualitative research skills while gaining familiarity with theories, issues, and problems in qualitative research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8231. Demography & Immigration. 3 Credit Hours.**

This course surveys the social demographic research on immigration, broadly conceived, and the numerous social, economic, and political processes with which it intersects. The course has two main goals: (1) to introduce students to the sources of data most commonly used by social demographers to study immigration and to social demographic methods; and (2) to critically review the leading social demographic research literature on the dynamics of immigration and social change. The data and research covered during the semester will focus primarily on the United States, but a non-negligible share of the course will be devoted to cross-national comparisons, the global migration system, and transnationalism and development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8241. The Ethics of Social Research. 3 Credit Hours.**

This course examines many of the ethical dimensions of conducting social research. Social researchers are accountable to: a) their own consciences and their own ethics, b) the actual people they are studying, c) international and federal laws, d) institutional policies and practices, e) their disciplines and sub-fields, f) their peers and colleagues, and g) any other communities to which they belong or in which they participate. This course examines a series of readings organized around key themes in research ethics. In addition, students are asked to investigate particular cases of alleged research misconduct and to take a position on the controversy. By the end of this class, students should: 1) Know the key laws and statutes governing social research; 2) Be familiar with the ethical resources available to social researchers; 3) Be able to evaluate the ethics of particular research cases; and 4) Be able to weigh ethical dilemmas in their own research practice and make responsible decisions about those dilemmas.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8311. Sociology of Education. 3 Credit Hours.**

The main focus is on the ways educational systems both maintain and challenge social inequality. Students discuss the ways education differentially allocates resources based on race, class, and gender. The class explores this issue in both "classical readings" in the Sociology of Education, and also in recent books by those working in the field. Books chosen for the course are intended to begin discussion on contemporary debates. The class pays special attention to whether the policies discussed by them ameliorate or exacerbate existing inequalities by race, class, and/or gender. This course has three main objectives: (1) prepare students for the preliminary examination in the Sociology of Education through discussions of main theories, ideas, and classical works in the field; (2) promote critical debate about contemporary issues in education by reading and discussing "hot topics" in education like debates over curricula, "marketing" universities, racial inequality in school achievement, and school choice; and (3) advance students' own research projects through frequent discussions and evaluations of students' work by the instructor and their peers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8331. Race and Ethnicity. 3 Credit Hours.**

This course focuses on the nature of racism, discrimination, prejudice, racial conflict, and racial oppression in American society. Special emphasis will be given to the relationship between race, gender, nationality, immigration status and social class.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8341. Sociology of Kinship. 3 Credit Hours.**

This course will survey a range of topics from the field of sociology of kinship: historical changes in kinship as well as global changes in the family over the twentieth century; inequalities in families related to social class, social capital and family life; inequalities related to race and ethnicity; comparative adolescence and transitions to adulthood; sexuality and love in transnational contexts; perspectives on psychic and intimate relations in families; gender and power relations within the family; the state, public policy and the politics of kinship relations and more. We will also examine how the family came to be a centrally contested sphere in contemporary American political debates. Finally, you will have hands-on experience formulating a research proposal that investigates a research question related to this literature as well as assessing and responding to the proposals of your classmates. The purpose of the seminar is to review some of the major debates in this rapidly evolving field and to gain experience in formulating viable research questions about contemporary kinship issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8361. Urban Sociology. 3 Credit Hours.**

This course is about the space and urban sociology. The goal of this course is twofold: 1) to review, assess and analyze important theoretical perspectives on space in urban sociology, and 2) to determine the utility of applying these perspectives to contemporary urban issues. Urban problems will be examined largely from the perspective of how space and location are linked to these problems and they will not be investigated in their own right. The underlying theme of this course relates to theoretical propositions around space. This course will also focus on research from the vantage point of how theory can and should be used as a foundation for conceptualizing research problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8371. Sociology of Culture. 3 Credit Hours.**

The goal of this class is to survey the breadth of work that has been conducted under the sociology of culture, to identify the many ways that culture has been shown to be powerful, to examine competing theories about how culture works, to identify the types of research methods that can be used in cultural analysis, and to pinpoint the ways that each of us can embrace a cultural perspective in our own research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8381. Social Inequality. 3 Credit Hours.**

This course reviews theories and research regarding the dimensions of inequality and the processes which create, increase, and decrease inequality. It also examines the issues of the relationships between the dimensions of inequality and the processes of cumulative advantage and disadvantage. Individuals, groups, areas, and other social contexts are typically organized hierarchically, and the course explores the ways in which these different social levels shape and are shaped by social inequality over the life course. Examples of these processes include social multiplier effects, "winner take all" theories, the "Matthew Effect" in science, and the "Peter Principle."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8391. Medical Sociology. 3 Credit Hours.**

This course examines the historical changes in the ideas of health and disease and in society's response to illness. An important component of the course will be to examine the influences of social/political environment on morbidity and mortality in the United States and how population sub-groups experience illness in the medical system.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8401. Sexuality and Gender. 3 Credit Hours.**

This is a research intensive course in which we will examine the historical and sociological structures underlying relationships of sexuality and gender. The perspective of the course is that sexuality is a social creation with meaning to be found in culture. Sexuality is learned through socialization and resocialization. This learning takes place within a gendered social system and so sexuality itself is gendered in our culture. We will examine a number of theoretical perspectives and read the major sociological work in the field. The course will be divided into a reading seminar during the first half of each class and research presentations by students in the second half. During the course of the semester each student will each work on a topic of her choosing and will present her progress to class periodically.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8411. Gender and Body. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8421. Urban Health. 3 Credit Hours.**

Globally, the majority of humans now live in cities. Yet questions about what makes for healthy cities—and how we can measure and assess the complex relationship between health and place—continue to pose theoretical and methodological challenges for planners, social scientists, and biomedical researchers. Recent scholarship in the sociology of health and illness has focused on how the social determinants of health—sometimes called the non-medical determinants of health—powerfully shape health and mortality outcomes. Poverty, social isolation, political ideologies and economic policies, neighborhood contexts and effects of social networks have all been shown to be influential in determining the health and well-being both of entire groups and the individuals in them, acting as a serious constraint on (or enabler of) basic life chances. This course focuses on the empirical evidence for these health disparities and the theories about how and why they manifest as they do in urban settings. This seminar is designed to appeal to students interested in urban health, population health, the sociology of health and illness, and place and health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8431. Globalization and Development. 3 Credit Hours.**

This graduate course is designed to critically examine the competing perspectives, historical processes, and key issues and debates in the study of globalization and development. Our emphasis is on the relationships between local and global social, economic, political, and cultural processes. In particular, we will focus on the late 20th century and early 21st century "globalization," known as the "neo-liberal globalization," and how the forces of globalization interact with the development trajectories of nation-states, societies, and communities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8510. Special Departmental Seminar. 3 Credit Hours.**

The topics will vary and cover areas not covered by the current roster of classes. Please consult with the instructor for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SOC 8620. Departmental Seminar. 3 Credit Hours.**

The topics will vary and cover areas not covered by the current roster of classes. Please consult with the instructor for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SOC 8873. Writing for the Social Sciences. 3 Credit Hours.**

This seminar will help any social scientist become a better writer and thinker. We'll achieve this by creating a collaborative space where a community of readers help each other draft and revise our writing and thereby refine our thinking. The course begins with what makes for good writing in general, starting with sentences then moving onto paragraphs and outlines, and then onto the two types of editing: copy-editing and developmental editing. Then we move to the basics of good arguments, a key skill for social scientists. The course requires you to develop and submit a semester-long work plan that specifies dates for key writing deliverables. You will choose or be assigned a writing partner, who in addition to your instructor will serve as a primary reader and editor of your work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 8883. Second-Year Research. 0 Credit Hours.**

This course is for students preparing their Second Year Research Paper. Students will need to assemble a committee of two sociology professors who will grade their second-year paper. Students will work with their committee throughout the semester to make sure their work is aligned with committee expectations. Committees will evaluate papers based on the demonstrated abilities to synthesize the relevant literatures, to conceptualize a researchable problem, and/or carrying out a feasible research design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in SOC 8011.

**SOC 9111. Contemporary Sociological Theory. 3 Credit Hours.**

This course surveys a broad range of theoretical perspectives from the 20th and 21st centuries. The course compares these theories in terms of how they contribute to on-going sociological research around a number of social problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9131. Theories of Identity. 3 Credit Hours.**

A seminar that offers the students the opportunity for specialized study of one of the most debated issues in sociology nowadays: social and cultural identities. The course will deal with the latest developments in identity theory, emphasizing the work of Louis Althusser, Michel Foucault, Ernesto Laclau, Chantal Mouffe, Slavoj Zizek, Stuart Hall, Craig Calhoun, R.S. Perinbanayagam, James Holstein, Jaber Gubrium, Judith Butler, Lawrence Grossberg, Charles Taylor and Paul Ricouer, among others.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9141. Theories of Globalization. 3 Credit Hours.**

This course provides a broad introduction to the major theories, approaches, issues and debates in the studies of globalization. Globalization has redefined not only the way we understand society at the very basic level but also our own sense of place and identity in a world where we are connected to and influenced by events and people in far off places. Substantively, this course will focus on the relationships between local and global social, economic, political, and cultural processes across time and space. Our scope will be global and historical-comparative, and our approach will be sociological and interdisciplinary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9211. Graduate Data Analysis. 3 Credit Hours.**

In this course, you will do original sociological research using secondary data analysis. In this course, in addition to looking for meaningful relationships between variables in the data, we apply quantitative research methods to examine explanations for why relationships between variables may exist. To do this, we explore whether and how a relationship between two variables changes when we add a third (or fourth or fifth...) variable. The research process consists of several steps: (1) construct a research question, (2) formulate one or more theories related to your research question based on a literature review, (3) turn those theories into testable hypotheses, and (4) test those hypotheses using secondary data. Your research will be presented in a final paper organized according to the standards of the discipline and then summarized in an oral presentation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SOC 8211.

**SOC 9241. Qualitative Data Analysis. 3 Credit Hours.**

The central goal of this course is to have students complete a qualitative research project. It focuses on how to collect data, how to organize data for analysis, and how to use the data to answer a research question and/or develop concepts that might inform future research. Toward this end, the course begins with readings about the qualitative research process. The readings detail the agenda(s), logic, and epistemological foundation of qualitative research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9291. Departmental Seminar in Research Methods. 3 Credit Hours.**

The topics in research methods will vary and cover areas not covered by the current roster of classes. Please consult with the instructor for details.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9311. Immigration and Inequality. 3 Credit Hours.**

The causes, consequences, and repercussions of immigration constitute one of the most important topics of the 21st century. This course surveys key current theoretical debates in the study of international migration with an emphasis on related literature dealing with gender, kinship, and ethnicity. Considered are theoretical approaches to international migration; controversies regarding assimilation; the framing of migration through gender and kinship relations, social networks, and social capital; family ideologies and achievement; and the social context of immigration, ethnic niches and enclaves, transnationalism, empirical trends in post-WWII United States immigration and settlement, second-generation immigrant patterns, and immigration policies and politics. The long-term goal is to encourage students to undertake research in the field of migration research. This field is unique in its interdisciplinary and methodologically pluralist nature: stretching from the demography and economics of migration, through political science, sociological and geographical approaches, to the ethnography and oral history of migrants.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9321. Theories of Race and Racism. 3 Credit Hours.**

This course focuses on theories and analyses that seek to explain the social salience of race. The selected readings explore various concepts that surround the study of race, such as racism, white supremacy, oppression and subordination, nationalism, sexism and inequality. Many scholars believe that modernity, capitalism, and race are coterminous. We will explore in this seminar those connections. Some of the questions that we will explore are: How did the racial dimension of world society come to be, and how did it gain such weight in the organization of social/economic/political processes? How are the racial dimensions of society constituted and changed? How are they related to other central aspects of society, such as class, gender, ethnicity, age, nationality, citizenship, etc.? What is the relation between race, racism and whiteness? Is it a colorblind society possible? What is a "race narrative" and how it affects people's identities and social structures?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9382. Independent Study Progm. 1 to 6 Credit Hour.**

With the consent of the graduate chairperson and the instructor concerned, students may select an intensive program of study and/or research within a specific area of sociology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SOC 9385. Internship in Social Research. 1 to 6 Credit Hour.**

The internship in social research provides a learning experience that unites the core concepts of sociology with professional organizational settings and the community as a whole, while also guiding students as they transition into their own professional lives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SOC 9386. Internship in Social Research - Part II. 1 to 6 Credit Hour.**

The internship in social research provides a learning experience that unites the core concepts of sociology with professional organizational settings and the community as a whole, while also guiding students as they transition into their own professional lives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in SOC 9385.

**SOC 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

This is an advanced reading course for students preparing for the preliminary examination.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SOC 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

This course is for advanced graduate students who are developing a dissertation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SOC 9999. Dissertation Research. 1 to 6 Credit Hour.**

This course is for advanced graduate students, post-candidacy, working on their dissertations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Spanish (SPAN)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SPAN 5060. Special Topics. 3 Credit Hours.**

A comprehensive study of language, literature, culture or other areas of special interest in the Hispanic/Latinx worlds.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5121. Survey in Spanish Literature. 3 Credit Hours.**

Survey of selected periods and themes of Spanish literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5122. Medieval Spanish Literature. 3 Credit Hours.**

This course analyzes Spanish texts written during the Middle Ages.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5124. 16th and 17th Century Spanish Literature. 3 Credit Hours.**

This course is devoted to the study of the literature produced during what has been called the Spanish Golden Age.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5126. Cervantes. 3 Credit Hours.**

The course entails an in-depth study of Miguel de Cervantes' selected works

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5136. 18th and 19th Century Spanish Literature. 3 Credit Hours.**

This course is devoted to the study of Spanish literature during the 18th and 19th centuries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5137. Hispanic Modernism. 3 Credit Hours.**

Using significant works by leading authors (i.e., Casal, Gutierrez Najera, Jimenez, Machado, Marti, Unamuno, and/or Valle-Inclan), this course explores aspects of Modernity in Spain and/or Spanish America.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**SPAN 5138. 20th and 21st Century Spanish Literature. 3 Credit Hours.**

This course is devoted to the study of Spanish literature during the 20th and/or 21st centuries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5141. Survey in Spanish-American Literature. 3 Credit Hours.**

Survey of selected periods and themes in Spanish American literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5142. Spanish-American Short Story. 3 Credit Hours.**

This course explores the evolution of the Spanish- American short story.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5143. Spanish American Novel. 3 Credit Hours.**

This course is devoted to the in-depth study of the Spanish-American novel.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5144. Spanish American Poetry. 3 Credit Hours.**

This course studies the trends in Spanish-American poetry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5146. National Literatures of Spanish America. 3 Credit Hours.**

This course studies literature in its cultural context focusing on texts from one or more countries in Spanish America.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5148. Latin American Literature of Social Conflict. 3 Credit Hours.**

This course analyzes class, ethnic, gender, religious, and other social conflicts in Latin American literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5151. Literature of the Caribbean. 3 Credit Hours.**

This course is a comparative study of representative literary works from Cuba, the Dominican Republic, Puerto Rico, and non-Spanish speaking nations of the Caribbean.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5152. U.S. Latino Literature. 3 Credit Hours.**

This course examines U.S. Latino literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5161. Hispanic Literature through Art. 3 Credit Hours.**

This course is a comparative study of trends and styles in Hispanic literature in the context of trends and styles in the history of art.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 5301. Spanish Phonetics. 3 Credit Hours.**

This course studies the articulatory and acoustic nature of Spanish phonemes and allophones, the syllable, stress, suprasegmentals, and intonation, with attention to regional variation and comparisons with English.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 5302. Introduction to Spanish Linguistics. 3 Credit Hours.**

This course covers concepts and methods of linguistic description and explanation applied to the phonology, morphology, syntax, and semantics of the Spanish language.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 5303. Spanish/English Contrasts. 3 Credit Hours.**

This course is a systematic study of the phonological, morphosyntactic, and lexico-semantic patterns of Spanish and English.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 5304. Spanish Applied Linguistics. 3 Credit Hours.**

This course takes a linguistic approach to theories of language learning and teaching, including second language acquisition.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 5305. History of the Spanish Language. 3 Credit Hours.**

This course covers the development of the Spanish language from its early beginnings (Latin) to the many present-day regional, social, and stylistic varieties. Analysis is made of the phonological, morphological, syntactic, lexical, and semantic changes Spanish went through.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 5306. Spanish Sociolinguistics. 3 Credit Hours.**

This course covers the concepts and methods in sociolinguistic research as applied to the study of variation and change in the Spanish language.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 5401. The Art of Translation. 3 Credit Hours.**

This is an advanced course on the strategies of translating literary texts from Spanish to English, including practice and practical orientation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 5601. Spanish for Health Professions. 3 Credit Hours.**

In this course students will acquire a foundational knowledge of the medical language and cultural practices pertinent to interactions in a healthcare context that includes Spanish-speaking and Latino patients. Intensive study of medical vocabulary, participation in role-plays, and readings of cultural norms in medical contexts will prepare students for basic interactions with Spanish-speakers. In addition to discrete vocabulary terms, students will learn to use and recognize high frequency phrases in medical contexts bettering their oral and aural skills. To develop long-term retention of vocabulary, frequent practice using video, audio, online activities and interactions with the instructor will cement new vocabulary. In alignment with the CLAS (National Standards for Culturally and Linguistically Appropriate Services), course content will cover several areas of cultural competency, which include, but are not limited to, linguistic register, managing a situation without a trained interpreter, patient dignity, respect for cultural practice, ethical use of language, etc. The emphasis of the course is on the building a breadth of foundational skills that prepare the student linguistically and knowledgeably for more in-depth study of medical Spanish, translation/interpretation and Latino health issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (SPAN 1003 or 'EXMPT' in LCSP)

**SPAN 5602. Advanced Medical Spanish. 3 Credit Hours.**

In Spanish 5602 students use their Spanish for a specific purpose: providing health services to a Spanish speaker, or intervening as an interpreter or translator to facilitate the practice of some aspect of medicine. Course content covers cultural competency, health literacy, communication skills, Spanish vocabulary and expressions for anatomy, systems, diseases and health-related concerns, medical tests, nutrition, and in-depth discussions of a selection of health-related situations. All class work, student-student interactions and student-professor interactions and assignments will be in Spanish. The emphasis of the course is on oral skills, which will be practiced in a variety of online platforms including: paired recordings, synchronous sessions with the professor, recorded responses to video and audio prompts, and an interview with a healthcare professional. The oral work will include presentations, role-plays and simple medical explanations. Readings of health-related materials and articles will be assigned, followed by oral and written reports which will consolidate students' ability to express themselves on materials studied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (SPAN 2096 or SPAN 5601)

**SPAN 5603. Latino Health Issues in the US. 3 Credit Hours.**

In 2015, the Hispanic population comprised 17% of the US population with 53 million individuals with diverse backgrounds. Effectively working with this population requires an understanding of the cultural, environmental, economic and medical factors that play a part in an individual's health, wellness and care. Through contemporary readings in Spanish and English from government publications, medical journals, US and foreign newspapers and a textbook, students will gain an understanding of the diversity of the Latino population and knowledge of the current research on the health issues and concerns that most frequently impact the Latino community. Additionally, this course will include practice in language varieties and registers to help professionals recognize the myriad language varieties they might encounter and to increase sensitivity to potentially offensive language expectations; instruction in some history and geography will develop cultural competencies and background knowledge of the population. In addition to readings, discussions and an ethnography, the students will engage in case studies and problem solving. Specific topics include: Access to Health Systems, Chronic Diseases, Child and Elder care, Mental Health.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (SPAN 2096 or SPAN 5602)

**SPAN 5604. Spanish/English Interpretation Techniques for Healthcare. 3 Credit Hours.**

This course introduces students to the ethics and techniques of interpretation and translation used in healthcare settings. To ensure safe and reliable communication and to help students engage in best practices whenever in the role of translator/interpreter, the course covers both translation/interpretation theory and practice. Students will learn about the roles of an interpreter, how to evaluate their ability to interpret in any given situation and how culture influences translation/interpretation. Students will work with authentic documents such as patient consent sheets, fact sheets, clinical paperwork (discharges) and medical journal articles. Interpretation practice will encompass such topics as medical diagnosis, procedural descriptions, and accurate interpretations of anatomy, physiology and medical language. Students must also demonstrate appropriate culture competence when interpreting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in (SPAN 2096 or SPAN 5602)

**SPAN 8000. Special Topic Seminar. 3 Credit Hours.**

Special topics course. Subject varies with instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8001. Hispanic Bibliography and Research. 3 Credit Hours.**

This course presents the tools and methods of research and investigation in Spanish and Ibero-American languages and literatures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 8110. Seminar in Spanish and Spanish-American Literature. 2 to 3 Credit Hours.**

The students examine intensively particular topics or issues concerning Spanish and/or Spanish-American literature. This course may be repeated if subject varies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8122. Seminar in Medieval Spanish Literature. 3 Credit Hours.**

This course studies aspects of medieval Spanish literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8130. Seminar in Golden Age Literature. 3 Credit Hours.**

This course studies aspects of Golden Age-Spanish literature

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8140. Seminar in 18th and 19th Century Spanish-American Literature. 3 Credit Hours.**

This course studies aspects of 18th and/or 19th century Spanish literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8141. Seminar in 20th and 21st Century Spanish Literature. 3 Credit Hours.**

This course studies aspects of 20th and/or 21st century Spanish literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8146. Colonial and 19th Century Spanish-American Literature. 3 Credit Hours.**

This course studies aspects of colonial and/or 19th century Spanish American literature.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8147. 20th and 21st Century Spanish-American Literature. 3 Credit Hours.**

This course studies aspects of 20th and/or 21st century Spanish American literature

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8149. Spanish-American Theater. 3 Credit Hours.**

This graduate seminar deals with the developments in Spanish-American theater since Naturalism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 8161. Critical Approaches to Hispanic Literature. 3 Credit Hours.**

This course provides an overview of critical theories and schools of thought in literary criticism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8300. Seminar in Spanish Linguistics. 2 to 3 Credit Hours.**

This course covers selected problems in the field of Spanish language and linguistics using a contemporary analytical and/or historical approach.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8301. Spanish Phonology and Morphology. 3 Credit Hours.**

This course provides an advanced theoretical and applied study of the sound system and the morphological system of present day Spanish and their relationship to each other.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8302. Syntax. 3 Credit Hours.**

This course covers the advanced theoretical study of Spanish syntax that combines generalizations of a descriptive nature with current syntactic theories such as functionalism and minimalism. Topics studied are noun phrase and verb phrase structure, case assignment and arguments, predication, transitivity/intransitivity, voice and syntactic relations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8303. Hispanic Dialectology. 3 Credit Hours.**

This course discusses the mechanisms of dialectal differentiation in Spain and Latin America as the result of diatopic, diastratic, and diachronic changes through normal language transmission and internal development, with special attention given to both historical and contemporary perspectives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8304. Spanish Language of Puerto Rico. 3 Credit Hours.**

This course studies the history, dialectology, and sociolinguistics of the Spanish language in Puerto Rico.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 8985. Teaching Higher Education: Language. 1 to 3 Credit Hour.**

This course focuses on learning theory and the best teaching practices, with the aim of preparing students for effective higher education teaching.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 9001. Spanish for Graduate Reading Knowledge. 1 Credit Hour.**

This course provides guidance and practice in the reading of Spanish language texts for students preparing for the Spanish reading/translation exam.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 9083. Directed Readings. 1 to 3 Credit Hour.**

This course is offered for students who wish to pursue independent study of research topics with faculty supervision. It is not to be used as a substitute for courses offered in the Department.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 9991. Directed Research. 1 to 3 Credit Hour.**

This course is offered for students who wish to pursue independent study of research topics with faculty supervision. It is not to be used as a substitute for courses offered in the Department.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 9993. Master's Comprehensive Examination. 3 Credit Hours.**

Students enrolled in SPAN 9993 will work with three faculty members to prepare a customized reading list for each of the 3 areas in which they are going to be examined before finally taking the comprehensive examination. The three areas in the Department of Spanish and Portuguese (Latin American studies, Spanish Peninsular studies, and Hispanic Linguistics) will be represented by one faculty member. To fit the structure of the MA comprehensive exam, one of these areas will be designated as the main area. The departmental Associate Chair for Graduate Studies will supervise mentoring and submit the final grade.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPAN 9994. Preliminary Examination Preparation. 1 to 6 Credit Hour.**

Must be taken by all graduate students in the semester following coursework completion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 9998. Pre-Dissertation Research. 1 to 6 Credit Hour.**

Must be taken by all students in the Ph.D. program who have finished coursework, passed the Preliminary Examination, and are preparing the dissertation proposal.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPAN 9999. Dissertation Research. 1 to 12 Credit Hour.**

This course is intended only for those students who have achieved Ph.D. Candidacy status. A minimum of 6 semester hours is required for graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Special Education (SPED)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SPED 5105. Assessment in Special Education. 3 Credit Hours.**

This course is designed to provide students with an understanding of assessment theory, the purposes of assessment and specific assessment techniques as they relate to the education of struggling students and students with disabilities. Emphasis is placed both on how assessment is used to identify students with disabilities and how assessment can be used to plan and monitor the effectiveness of instructional practices related to student learning and development in the classroom. We use a problem-solving approach in this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5106. Literacy Instruction for Students with Disabilities. 3 Credit Hours.**

The focus of this graduate level course is to provide knowledge of language and literacy for pre-service PreK-12 teachers. In turn, this knowledge will serve as grounding for effective literacy instruction for struggling readers in inclusive settings including students with a wide range of abilities and disabilities. Emphasis will be placed on understanding theories and interventions that surround language acquisition and literacy development for children in Pre-Kindergarten to grade 12 settings, with an additional exploration of how language and literacy are impacted by diversity, various disabilities and atypical behaviors. Attention will be given to basic knowledge about literacy and language development with information on such important topics as: reading components and building-blocks, writing and spelling elements, reading fluency, reading comprehension, and the facilitation of language in the classroom. An equally important theme will be how to actually implement this knowledge in inclusive classrooms through: appropriate assessment practices, research validated literacy interventions, developmental reading programs, evidence-based instructional practices, and content area materials. Other integral parts of literacy and language development, such as co-teaching, collaboration with paraprofessionals and other related support staff, spoken language, communication skill development through assistive technology, and universal design in inclusive classrooms will be examined at the instructor's discretion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5107. Understanding and Using Special Education Research. 3 Credit Hours.**

This course provides students with an introduction to research methods used in special education. Students will learn how to critically read research and evaluate if practices are evidence-based. The goal of this class is not for students to leave with the ability to design studies, but for students to understand which components are necessary for making causal claims about interventions. Students will leave with tools to select and use evidence-based practices in their classrooms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5108. Assistive Technology and Universal Design. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5109. Classroom Management and Positive Behavior Support. 3 Credit Hours.**

This course provides an in-depth presentation of Positive Behavior Interventions and Supports and its application in classroom systems to prevent challenging behavior and academic failure. Infused throughout the course will be intervention strategies that will allow for the accommodation of all children in the general-education system. The emphasis of the course will be proactive, constructive strategies that prevent, rather than react to, classroom difficulties.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5111. Educating Students with Disabilities in Inclusive Settings. 2 Credit Hours.**

This course is an introduction to effective strategies for teaching students with disabilities. This course will identify strategies that will aid in student success throughout the middle grade years in the least restrictive environment. Emphasis is placed on evidence based strategies and activities specific to middle grades students, technology in the classroom, and ways to address diversity in today's classroom.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Co-requisites:** MGRE 5102, SPED 5187.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5187. Graduate Assessment Practicum in Early Childhood Special Education. 3 Credit Hours.**

This course is field-based with classroom/online experiences and designed to provide students with an understanding of assessment theory, the purposes of assessment and specific assessment techniques as they relate to the education of struggling students and students with disabilities. Emphasis is placed both on how assessment is used to identify students with disabilities as well as how assessment can be used to plan and monitor the effectiveness of instructional practices related to student learning and development in the classroom. We use a problem-solving approach in this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Co-requisites:** MGRE 5102, SPED 5111.

**Repeatability:** This course may be repeated for additional credit.

**SPED 5201. Students with Moderate to Severe Disabilities: Effective Teaching Strategies. 3 Credit Hours.**

This course is an introduction to best instructional practices and strategies for teaching students with a range of moderate to severe disabilities in varied educational settings. The purpose of this course is to identify and understand specific evidence-based strategies that positively impact student success based on student profiles including abilities, disabilities, interests, assessment data, and needs for supports. Emphasis is placed on strategies and activities specific to learners spanning from Pre-Kindergarten through 12th grade. We emphasize and practice collaboration and communication strategies which will be expected of us as professional special educators. In addition, we discuss/analyze appropriate applications of instructional, adaptive and assistive technology in the classroom. Finally, we focus on ways to incorporate/encourage family participation and embrace diversity in contemporary classrooms comprised of diverse learners having diverse abilities and needs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5211. Effective Instruction for Students with Disabilities. 3 Credit Hours.**

This course is an introduction to effective instruction and strategies for teaching students with disabilities across Pre-K to 12th grade. The purpose of this course is to identify specific strategies that will aid in student success in the inclusive setting. Emphasis will be placed on strategies and activities specific to pre-kindergarten and elementary students, collaboration and communication strategies among professionals, technology in the classroom, and ways in which to address family participation and diversity in today's classroom.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5287. Integrated Literacy and Special Education Practicum. 2 Credit Hours.**

This integrated practicum experience will provide opportunities for students to apply theoretical models and research-based instructional strategies in the area of literacy to middle grades students in inclusive classrooms. Focus will be placed on developmental, cognitive, physical, social, behavioral, processing and learning needs of students and how these needs relate to comprehending written text, specifically for students having disabilities. Particular emphasis will be focused on ways to connect information from the co-requisite literacy methods course and apply this knowledge to students with disabilities in the middle grades classroom. Differentiated instruction, response to intervention, appropriate curricular modification, and authentic assessment related to appropriate instructional decision-making are themes that run throughout this learning experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Co-requisites:** MGRE 5102, SPED 5111.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in (EDUC 5402 and MGRE 5101)

**SPED 5301. Building Communication in Students with Autism Spectrum Disorder and Severe Disabilities. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**SPED 5302. Effective Teaching Strategies and Academic Interventions. 3 Credit Hours.**

This course overviews assessment and intervention strategies for learners with skill deficits. Learners with a diverse set of needs will be discussed in the course (e.g., neurotypical, autism, intellectual disability, emotional and behavioral disturbance, among others). The link between assessment and intervention will be emphasized throughout the course, with attention to effective practices for learners with diverse needs. Students enrolled in the course will learn how to select, administer, score, interpret, and report results for a variety of behavioral assessment methods that will be related to selecting interventions, monitoring student progress, and making decisions based upon data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Clearance for Education.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5303. Ethics and Applied Behavior Analysis. 3 Credit Hours.**

This course provides the student with an overview of ethical practices and considerations for behavior analysts working across a variety of applied settings, including schools and agencies that support people with disabilities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5304. Concepts and Principles of Behavior Analysis. 3 Credit Hours.**

This course provides the student with an introduction to the concepts and principles of behavior analysis. Core concepts including motivation, reinforcement, punishment, extinction, and rule governed and verbal behavior will be covered, along with examples of behavior change techniques that employ these concepts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5305. Single Subject Research Design. 3 Credit Hours.**

This course provides an overview of strategies for designing and conducting single-subject research in special education. Competencies include selection of independent and dependent variables for research, measurement tactics, research design, establishing generality of results, and ensuring the integrity of research procedures. The methods discussed are not specific to any disability or age level; rather, they are a general set of methods for conducting and interpreting single-subject research.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5401. Students with Mild Disabilities: Effective Teaching Strategies. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5402. Effective Transition Practices for Students with Disabilities. 3 Credit Hours.**

The focus of this course is to provide knowledge and skill development in the areas of transition planning, self-determination, and collaboration among professionals, families, and students with disabilities in academic, vocational, and community settings. Emphasis will be placed on evidence-based practices in transition to enhance post-school outcomes, including assessment, instructional strategies, and identified predictors of post-school outcomes. Special attention will be given to knowledge about pre-K, elementary, middle school, and secondary transition to postsecondary education and employment, along with information on such important topics as: transition-related legislation; local, state, and national resources; inclusive secondary education; self-determination, family involvement, interagency collaboration, and transition Individualized Education Programs (IEPs).

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5501. Learning Environments. 3 Credit Hours.**

Examination of the context in which exceptional persons learn. Consideration of the influence of multiculturalism, the family, school, social agencies, the media, courts, laws and forces such as inclusion as they affect the learning environment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5511. Managing Learning Environments. 3 Credit Hours.**

Provides students with the knowledge of a range of alternative management techniques appropriate for facilitating learning in classrooms, within families and in other environments. Multicultural aspects of learning environments are considered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5512. Methods and Curriculum. 3 Credit Hours.**

An introduction to the appropriate assessment and teaching of persons with disabilities at a variety of age levels. Particular emphasis placed upon the modification of the basic school curriculum.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5521. Issues in Social, Emotional, and Physical Development. 3 Credit Hours.**

The nature, developmental problems, assessment, and educational intervention of physical, perceptual, motor, and socio-emotional problems are studied. Field application including observations, interviews, and trial interventions are required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5522. Cognition, Language, and Literacy. 3 Credit Hours.**

Deals with the following aspects of language and cognitive development: nature and theory, multicultural aspects, normal acquisition and development, problems in development, assessment and intervention strategies. An attempt is made to link theory and practice.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5587. Special Education Practicum. 6 Credit Hours.**

The special education practicum experience is taken during the final semester of study before completion of the special education teacher preparation program requirements. Eligibility for graduation and recommendation for K-12 Special Education certification is contingent on the successful completion of this practicum. Students are provided with an opportunity to be in a classroom for an extended period of time and to put into practice what they have learned in their special education courses. Over the course of the semester, students will experience, in depth, the full role and meaning of teaching in special education and/or an inclusive classroom. Experiences include planning and organizing for instruction, developing classroom teaching competencies and skills, evaluating pupil progress, participating in extra-class activities, participating in the development of IEPs, working collaboratively with other school personnel, and utilizing school and community resources in the instructional program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may be repeated for additional credit.

**SPED 5611. Total Inclusion Seminar. 3 Credit Hours.**

Course content focuses on inclusive practices in school, community, and employment settings for students with various degrees of disability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 5666. Introduction to Special Education. 3 Credit Hours.**

This class is a preliminary overview of inclusion and its pervasive, on-going impact on both special and general education. Special emphasis will be placed on: the legal ramifications of inclusion, related terminology, and IEPs; various disability categories; adapting the classroom environment, especially in terms of various behavioral concerns and positive behavioral supports; teaching strategies and assessment practices appropriate to inclusion; and collaborative relationships with parents in inclusive settings. Other topics and miscellaneous resources/best practices will be highlighted at the instructor's discretion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 8101. Trends and Issues in Special Education. 3 Credit Hours.**

Discussion and examination of current topics in special education. We will examine controversial and/or critical issues in special education, which may include: current IDEA definitions (e.g., LD, OHI, ED, and CI), controversial treatments and evidence-based practices, issues with evaluation of students (e.g., RTI, over-representation, testing), special education laws and policies, the role that research plays in education, as well as other topics relating to special education or inclusion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 8701. Proseminar in Individual Differences. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 8711. Seminar in Special Education Research. 3 Credit Hours.**

A seminar on problems of research as applied to special education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 8741. Seminar in Exceptionalities. 3 Credit Hours.**

Current trends, problems, and issues in special education, teacher education, research, and administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 8742. Seminar in Exceptionalities. 3 Credit Hours.**

Current trends, problems, and issues in special education, teacher education, research, and administration.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SPED 9187. Practicum in Special Education. 3 to 9 Credit Hours.**

Temple will place students at a site. One-half day of practice teaching, five days each week for the full semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPED 9287. Practicum in Special Education. 3 to 6 Credit Hours.**

Temple will place students at a site. One-half day of practice teaching, five days each week for the full semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPED 9387. Practicum in Special Education. 3 to 6 Credit Hours.**

Full-time summer practicum. Temple provides the practicum site. Five full days (mornings and afternoons) of practice teaching each week for the full summer semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPED 9485. Augmen Comm Empow Intern. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SPED 9489. Fld Exp Spec Ed Supervis. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

# Sport and Recreation Management (SRM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

## **SRM 5201. Sport Finance. 3 Credit Hours.**

With the recent growth of the sports industry, competent managers must have a sound understanding of finance topics and the ability to apply a series of basic financial principles to the decision-making process of sport firms and organizations. Financial decision-making, including cash management; ratio analysis; asset management; leverage; short, intermediate, and long-term financing will be the course focus. Additionally, different types of budgets will be reviewed and students will learn the budget preparation and approval process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## **SRM 5202. Sport Economics. 3 Credit Hours.**

This course uses the world of sports as a practical application for many economic theories. The tools learned from the fields of industrial organization, public finance, and labor economics will be used to examine sports and economics. Time and preferences may lead to examining the fields of amateurism and college sports, and finance. The intent of this course is to examine the sports world as economists, thus we will gain greater insight into both the sports world and the economists' world.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

## **SRM 5211. Sport Finance and Economics. 3 Credit Hours.**

This course will analyze the relationship between finance and the sport and recreation industry. The purpose is to apply a series of basic financial and economic principles to the decision making process of sport firms and organizations. Issues include optimal pricing strategies, demand analysis, optimal financing, hiring decisions, and investment decisions; all of which can be undertaken with the tools addressed in this course. This course examines a variety of financial management issues relevant to major professional sport franchises, the corporations that use sport as a vehicle for promotion, and other organizations comprising the industry. Additionally, emphasis is placed on the financial and economic aspects of the public finance of sport facility construction and other forms of government subsidizes of the sport industry.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

## **SRM 5212. Legal Issues in Sport and Recreation. 3 Credit Hours.**

The course addresses the legal aspects of sport, recreation, and leisure services, with a focus on tort liability, human rights liability, criminal liability, and contractual liability. Legal concepts of negligence, situations which give rise to law suits, and principles of risk management will be covered. Legal issues related to use of equipment, facility management, and accommodation for special populations will also be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

## **SRM 5214. Philosophy and Ethics. 3 Credit Hours.**

The course will apply the traditional philosophical schools of thought (Idealism, Realism, Pragmatism, and Naturalism) to the philosophy of sport and recreation. In addition, Existentialism and Humanism will be analyzed to determine the implications for organizing sport and recreation programs. The course also covers issues and problem areas associated with ethics, ethical behavior, and ethical codes of sport and recreation professional associations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5215. Sport Marketing. 3 Credit Hours.**

This course provides an overview of the core sport marketing and promotions principles. In addition to covering the essentials of the marketing mix, this course will also include lessons on the development of marketing strategies in the modern sport marketplace.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5216. Strategic Management in Sport and Recreation. 3 Credit Hours.**

This course focuses on the basic functions of management and the strategic challenges confronting firms that compete in the global economy within the sport and recreation industry. It provides students a forum in which to apply and integrate management and strategic theories, practices and skills in a global environment, and across all types of organizations, including public, private, and voluntary. The course also gives opportunities for entrepreneurs in the industry through business plan development.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5217. Sport Facility Management. 3 Credit Hours.**

The principles of planning areas and facilities for sport, recreation, and parks are explored. In addition to the design and construction of specific sport and recreation facilities, approaches to standards and regional planning will be discussed. Problems and issues related to funding, maintenance, and use of sport and recreation facilities will be analyzed. The course will also include trends in facility design, construction, and maintenance.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5218. Equity, Inclusion, and Ethics in Sport Business. 3 Credit Hours.**

This course examines an encompassing perspective of diversity within North American and international sport organizations. Specifically, the course provides students with an analysis and understanding of the various ways that people within sport organizations can differ, and how power differences based on this diversity impact life and work experiences and outcomes. The course covers issues of the non-dominant, historically under-represented elements of U.S. society, with a particular emphasis placed on racial, ethnic, and gender issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5220. Special Topics in Sport and Recreation. 3 Credit Hours.**

This course is designed to provide knowledge of the psychological foundations of consumer behavior, the mechanisms of influence that are most likely to lead consumers to change their attitudes, their beliefs, and, most importantly their actions, and how to engage these mechanisms in building persuasive communications. The focus of this class will be on the scientific research (of behavioral scientists from multiple disciplines) that illuminates the psychological processes underlying consumer behavior, with specific focus on spectator and participant based sport and recreation activities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**SRM 5221. Sport Governance and Policy. 3 Credit Hours.**

The course addresses the various approaches to organizing and governing sport and athletic programs from school sports to professional sports, from individual conferences to international organizations. Principles, issues, and problem areas associated with the governance of individual athletic departments will be addressed as well as the principles, issues, and problem areas associated with athletic conferences, and national and international governing bodies. Specific problems in relation to the size, structure, and staff of athletic departments and sport governing bodies will be analyzed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5224. Grad Seminar: Sport/Rec. 3 Credit Hours.**

Problems involving organizational patterns and administrative functions essential to effective program organization will be analyzed. There will be special emphasis on staffing, scheduling, records, equipment, fund raising, equipment liability, and plant facilities. Sessions with leaders and practitioners in sport and administration will be included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5225. Sport Sponsorship and Sales. 3 Credit Hours.**

The course analyzes and produces skills essential to revenue production through sport sponsorship and a variety of approaches and the identification of the various areas and components of sales in the sport industry. Sales theory, principles, current issues, and understanding the unique selling trends of organizations will be addressed as they apply to all levels of programs and in all types of contexts. Experiential learning will be a priority and will be infused into the content delivery through the learning experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5226. Consumer Behavior in Sport and Recreation. 3 Credit Hours.**

This course is designed to provide knowledge of the psychological foundations of consumer behavior, the mechanisms of influence that are most likely to lead consumers to change their attitudes, their beliefs, and, most importantly their actions, and how to engage these mechanisms in building persuasive communications. The focus of this class will be on the scientific research (of behavioral scientists from multiple disciplines) that illuminates the psychological processes underlying consumer behavior, with specific focus on spectator and participant based sport and recreation activities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5227. Sport Media and Communication. 3 Credit Hours.**

This course examines the various aspects of the relationship between sport and both media and communication. An overview of theories in media and communication is systemically provided and discussed. It focuses on the nature of traditional and digital media and its implication for sport policy and management. Specifically, the relationship between the sender, the message, the medium, and the audience are critically examined. Communication management and strategy are also discussed as the production, organization, and consumption of sport involve a wide range of communicative processes. Attention is also paid to the legal and ethical aspects of sport communication.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5231. Compliance in Intercollegiate Athletics. 1.5 Credit Hour.**

This course addresses the legislation related to rules compliance in intercollegiate athletics. Regulations and enforcement structure will be examined at the national, conference, and institutional levels. The implications and consequences of such legislation will be explored.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5232. Fundraising and Development. 3 Credit Hours.**

This course provides an overview of the role of fundraising and development in a sport setting. Students will gain an understanding of the strategies and processes used to generate revenue through philanthropic giving for programs. Environmental analyses and strategic planning will be central to training students to develop appropriate, successful fundraising and development programs. The role of governing bodies, ethical and legal implications will also be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5233. Governance and Policy in Intercollegiate Athletics. 3 Credit Hours.**

The purpose of this course is to provide an in depth overview of intercollegiate athletic governing bodies. The students will gain an understanding of the structure, policies, finances, and current issues related to intercollegiate athletics. Additionally, students will identify appropriate strategies for effectively dealing with current issues/problems in intercollegiate athletics.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5234. Student-Athlete Affairs in Intercollegiate Athletics. 1.5 Credit Hour.**

This course addresses the current state of student services in intercollegiate athletics. The course will also detail the support mechanisms aimed at the academic and personal development of student-athletes. The metrics used by the NCAA to measure academic performance of students will be explored, as well as industry trends and issues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5235. The Business of Recreation. 3 Credit Hours.**

The purpose of this course is to provide students with an overview to the scope and variety of recreational business. Time will be spent exploring the development of the industry, current state, and future trends through the lenses of recreation and leisure services. The course is also intended to introduce students to the business principles important for creating and operating a profitable commercial recreation enterprise, as well as how recreation is different from other goods and services in the sport industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5241. Evaluation of Programs and Events. 1.5 Credit Hour.**

The goal of this course is to provide students with the background necessary to understand the evaluation process in the field of events and recreation management. The focus of the class is on evaluation, assessment, and different types of program evaluation, including needs assessment, formative research, process evaluation, monitoring of outputs and outcomes, impact assessment, and cost analysis. Both quantitative and qualitative research methods are addressed. Students will execute an applied evaluation project. This project involves practice in interviewing, focus groups, survey questionnaire development, data collection, and data analysis. The course will provide students with a conceptual map of how evaluation research is conducted, the resources available to them, the vocabulary of research, and guidance in writing an evaluation report.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5242. Business of Non-Profit Organizations. 1.5 Credit Hour.**

This course examines the theoretical, philosophical, practical, and ethical perspectives related to the effective management and leadership of not-for-profit organizations in the twenty-first century. Students will examine strategies related to governance and policy development in the not-for-profit organization. The fundamental differences of working for a non-profit or government entity will be discussed and compared/contrasted with for-profit organizations. In addition, students will examine the unique managerial challenges posed to not-for-profit organizations and the typical techniques and practices used by leaders in the public and non-profit sectors. The course will also familiarize students with the legal implications, unique financial management, and revenue generating models of not-for-profit organizations.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5243. Event Management. 3 Credit Hours.**

An experience-based course, this course will present principles of event management, along with a broad overview of opportunities in the industry. There will be a special focus on current trends and technology, risk management, staffing, and budgeting. A wide diversity of experiences will be available.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5251. Introduction to Sport Analytics. 3 Credit Hours.**

The class will discuss the theory, development, and application of analytics in sport. Students will learn about the application of analytics in sport for purposes of evaluating player performance, team management, market segmentation, pricing, and other areas in sport industry operations. Analytics includes the inclusive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based decision making. Analytic methods are employed to gain insights on team and player production, human resource practices, and game management. Additionally, quantitative methods are used to analyze pricing, advertising, promotions, and other sport business decisions. Many new techniques and methods to communicate analytical results are emerging and will be a factor in this new area of sport analytics.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Sport Business.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001 (may be taken concurrently) or STHM 5111 (may be taken concurrently))

**SRM 5252. Sport for Development. 3 Credit Hours.**

In grassroots development and peace promotions, sport is used in an extremely wide range of situations - whether as an integrated tool in short-term emergency human aid activities, or in long-term development cooperation projects on local, regional, or global scales. This course explores the role sport plays as a promoter of social integration and economic development in different geographical, cultural, and political contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5253. Applied Sport Analytics. 3 Credit Hours.**

This course is an applied analytics course where students will learn common analytics concepts standard in the sport industry as well as the tools to help analyze these concepts. Many of the questions this course will address will not have clear answers. The course seeks to enable students to practice analytics-based decision making skills to create a well-supported argument rather than attempting to identify what is correct.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5254. Advanced Sport Data Analysis and Visualization. 3 Credit Hours.**

This course will focus on learning the common technical skills required to be a successful data analyst in the sport industry. Students will learn how to use advanced data analytics software to deliver efficient, impactful insights when faced with problems related to the sport industry. Students will also be exposed to common data visualization and management tools.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5255. The Sport Workplace. 3 Credit Hours.**

This course focuses on the basic functions of management and the strategic challenges confronting firms that compete in the global economy within the sport and recreation industry. It provides students a forum in which to apply and integrate management and strategic theories, practices and skills in a global environment, and across all types of organizations including public, private, and voluntary. The course focuses on specific elements of the workplace that are distinctive within the sport industry, such as the role of affect and organizational climate. Career opportunities and industry labor statistics are introduced in depth to allow a full view of the broad sport industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**SRM 5256. Professional Portfolio in Sport Analytics. 3 Credit Hours.**

The professional portfolio is a capstone course that provides students within the Sport Analytics concentration with an opportunity to demonstrate achievement in sport analytics. The course is a true culminating experience where students synthesize learning from previous coursework in the concentration. Students will be required to conduct independent data analyses and share their work with the broader sport analytics community.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**SRM 5285. Graduate Internship in Sport and Recreation. 3 Credit Hours.**

The Graduate Internship experience represents a practical industry experience for students in the MS program. A minimum of 3 credit hours is required for all students, regardless of concentration. The Graduate Internship utilizes a field placement with emphasis on acquisition and application of practical skills. One hundred and eighty contact hours will take place in cooperation between the student and an agency, under supervision of both the University internship coordinator and the agency-designated supervisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

## **Sport, Tourism and Hospitality Management (STHM)**

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**STHM 5111. Applied Research. 3 Credit Hours.**

The course equips the student with an understanding of the process of pure and applied research and the scientific method, including an introduction to statistics and computer applications. It prepares the student to analyze critically the scientific literature of sport, recreation, tourism, hospitality, and leisure. The course will address the major ways of conceptualizing and designing research, and acquiring, interpreting, and disseminating data. It will focus on applied research, with the expectation that the students will learn the practical application of research uses in the professional setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 5411. Management of Organizations. 3 Credit Hours.**

The course addresses the basic functions of management as they pertain to the administration of organizations that function in primarily service industries like those represented by STHM. Management theory, principles, current issues, and problem areas will be addressed as they apply to all levels of programs and in all types of organizations, including public, private, and voluntary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 5413. Financial Management. 3 Credit Hours.**

The course will analyze managerial accounting and financial management, along with management strategies for financing ventures and expansion. Topics will include accounting systems and internal control, financial statement analysis and interpretation, operational analysis, cost behavior, budgeting and forecasting, pricing and feasibility analysis. Computer applications will be highlighted.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 5415. Service Marketing. 3 Credit Hours.**

The marketing mix (promotions, public relations, sales, advertising, operations, pricing) as applied to various settings will be analyzed, as well as marketing segmentation and targeting. The application of the principles specific to service marketing will be a primary focus of the course, which will employ case study methods in addition to traditional content delivery. Current issues and problem areas associated with marketing and public relations will be analyzed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 5483. Readings and Conferences. 1 to 3 Credit Hour.**

This course provides an opportunity for students to engage in extensive readings in the literature, under the direction of a faculty advisor, into topics not covered in other courses in the curriculum. Students must present a written proposal to a faculty advisor explaining why they wish to engage in additional readings in the literature as a part of their graduate degree program. The student will meet periodically on an arranged basis with the faculty advisor to discuss the readings.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9001. Research Seminar. 3 Credit Hours.**

Methodologies and techniques for the scientific investigation of tourism will be discussed. Trends in the history of tourism research will be identified through a critical analysis of the literature. Quantitative methods for tourism analysis will be discussed. The dissertation process will be highlighted, with preliminary development of a dissertation proposal being required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 9002. Seminar in Theory Development: Tourism and Sport Concepts. 3 Credit Hours.**

The impacts of tourism on both the host and guest will be discussed. Major theoretical approaches for understanding (a) tourism behavior and (b) tourism impacts will be addressed. Tourism theoretical foundation and the empirical record of tourism impacts will be related to tourism planning, development, and policy formulation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 9003. Sem:Tour/Hosp Mgt/Ebus. 3 Credit Hours.**

Electronic business and the Internet have impacted the tourism industry, especially the role of managers and management decisions, tremendously. This course will discuss the various business models that are used, highlight the successes and failures of these models, and strategize for disseminating the information to future managers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 9004. Seminar in Culture and Communication. 3 Credit Hours.**

This course focuses on the study of culture and communication in the context of tourism and sport. It draws on a growing body of cross-cultural research to examine ways in which cultural factors influence human behavior and communication, and interact in the development of such concepts as perception, identity, emotion, authenticity, interpretation, meaning, etc. In what ways are we alike? In what ways are we different? Why? The course explores world views, cultural values, relationships, communication theories and practices, and other topics in order to provide a context for understanding the differences in human behavior and communication and what those differences tell us about ourselves and others and, in particular, our experiences. The understanding of culturally different human behavior and communication presents a global challenge to the tourism and sport industry in the 21st century.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 9090. Special Topics in Tourism and Sport. 1 to 3 Credit Hour.**

This seminar is designed to provide an in-depth exploration of special topics, current issues, and trends in tourism and sport as they relate to topics such as interpretation of international multiculturalism; concepts of strategic management; the use of information technology and its impact on destinations; competitive strategy and marketing; environmental trends, planning, and development; policy formulation; and the social and economic impact of tourism and sport. Relevant industry problems and issues facing management and personnel in the related industries are discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9482. Independent Study. 3 Credit Hours.**

This course provides an opportunity for students to engage in systematic investigations, under the direction of a faculty advisor, into topics not covered in other courses in the curriculum. Students must present a written proposal to a faculty advisor explaining why they wish to undertake an independent study course as a part of their graduate degree program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9795. Master's Continuation. 1 Credit Hour.**

For master's candidates in the final stages of their program after coursework completion. Taken by arrangement with School adviser/coordinator. Satisfies continuous registration requirement in the final semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STHM 9982. Independent Research. 2 to 12 Credit Hours.**

This course provides an opportunity for students to engage in independent formal research, under the direction of a faculty advisor, into research questions which are not covered in other courses in the curriculum. Students must present a written proposal to a faculty advisor explaining why they wish to conduct independent formal research as a part of their degree program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9994. Preliminary Examination Preparation. 1 Credit Hour.**

This course is designed for those doctoral students who have completed all of the prescribed courses, but have not completed their doctoral comprehensive exams. Students will work with a doctoral advisor to develop a plan of study to prepare for the doctoral comprehensive exams.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9995. Master's Project. 3 Credit Hours.**

Sessions will be scheduled by arrangement with the Master's Project adviser. The Master's Project is limited to those who plan to earn the master's degree by completing a project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9996. Master's Thesis. 3 or 6 Credit Hours.**

Sessions will be scheduled by arrangement with the Master's Thesis adviser. The Master's Thesis is limited to those who plan to complete the master's degree by writing a thesis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9998. Pre-Dissertation Research. 1 to 3 Credit Hour.**

This course is designed for those doctoral students who have completed their doctoral Preliminary exams but who have not completed their dissertation proposal. Students will work with their assigned dissertation advisor to develop a plan of study leading to the approval of their dissertation proposal..

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**STHM 9999. Doctoral Dissertation. 1 to 9 Credit Hour.**

This course is designed for those doctoral students who have completed their dissertation proposal. Students will work with their assigned dissertation advisor and their dissertation steering committee to conduct the study outlined in the dissertation proposal. Students must remain registered for Doctoral Dissertation until the dissertation is approved by the examination committee at an oral defense, and the final copies of the dissertation are registered in the Graduate School.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Statistics (STAT)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**STAT 5001. Quantitative Methods for Business. 3 Credit Hours.**

This course is designed to introduce you to contemporary elementary applied statistics and to provide you with an appreciation for the uses of statistics in business, economics, everyday life, as well as hands-on capabilities needed in your later coursework and professional employment.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 5002. Introduction to Biostatistics. 3 Credit Hours.**

Topics cover statistical methods and concepts with special emphasis on applications in health and biological sciences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 5170. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 5182. Independent Study. 1 to 6 Credit Hour.**

Special study in a particular aspect of statistics under the direct supervision of an appropriate graduate faculty member. No more than six semester hours of independent study may be counted toward degree requirements.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 5190. Special Topics - Stat. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**STAT 5602. Visualization: The Art of Numbers and the Psychology of Persuasion. 3 Credit Hours.**

Organizations are collecting an unprecedented volume of data, and analysts are producing information from data using analytics and models. None of the information that is extracted from the data is usable unless it can be effectively communicated. In this course, we will begin with the fundamental questions of communication: Who is the audience? What is the information? What is the goal? Using these questions to focus our thoughts, we will explore the techniques that allow you to select appropriate information and to craft a narrative that clearly and effectively communicates this information using visual elements. Producing good visual displays is a combination of art and science and compromise between function and form. We will discuss how humans process and encode visual and textual information in relation to selecting an appropriate visual display, and we will cover topics including: exploratory data analyses, charts, tables, graphics, static and dynamic displays, effective presentations, multimedia content, animation, and dashboard design. Examples and cases will be used from a variety of industries.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 5603. Statistical Learning and Data Mining. 3 Credit Hours.**

This course is designed to change the way you think about data. Numerous firms have demonstrated that the ability to reliably extract managerially-relevant information from data is a potent and enduring source of competitive advantage, a realization that transforms data into an asset that can be a primary source of competitive advantage. Competition is pushing organizations to "mine" (or extract) these insights faster, with greater reliability, and in ways that maximize the probability of implementation. In this course we will explore how statistical learning and data mining techniques can be used to improve decision-making and profitability. The course will provide an overview of the fundamental principles and techniques of data mining, and we will use real-world examples, cases, and "hands-on" techniques to demonstrate data-mining techniques in context, to develop your analytic thinking, and to develop your model building acumen.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001, (STAT 5301 and MIS 5301), or (STAT 5401 and MIS 5401)) and STAT 5606.

**STAT 5604. Experiments: Knowledge by Design. 3 Credit Hours.**

How do we know which policies, strategies, and decisions work, which should be continued, and which should be changed? Organizations frequently implement strategies and changes, only to find that they fail to produce their intended effects. Thus, there is a gap between what "sounded good" and what was "right." Ultimately, the gold standard for assessing what is "right" is a controlled experiment, which is the least utilized technique in the corporate arsenal. Experiments provide a structured way to construct a feedback loop that allows us to identify errors in our beliefs and to ascertain the real drivers of outcomes. In this course, we will explore how to use this "test and learn" paradigm to answer questions such as how advertising should be designed and targeted, what types of promotions are most effective, what products should be offered, how employees should be compensated, which sales channels should be emphasized, how webpages should be designed, and more. Experiments are an ideal way to understand how to implement a "test and learn" approach to management and to separate the "signal" from the "noise."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001, (STAT 5301 and MIS 5301), or (STAT 5401 and MIS 5401))

**STAT 5605. Decision Models: From Data to Decisions. 3 Credit Hours.**

Good analysts know that predictions are always uncertain. However, merely expressing uncertainty is not sufficient for decision making. In addition, we need to combine the results of uncertain inputs into a more general model, account for the relative severity of negative outcomes, and choose a strategy that best achieves our goals (e.g. highest expected value, most robust, least chance of losing, etc.). We also need to communicate the process and conclusions to constituents and to decision-makers. This course focuses on techniques for combining uncertain inputs into a decision model that can be used to characterize likely and unlikely outcomes, to quantify risk, and to identify inputs to a decision that are "high leverage" (i.e., outcomes are very sensitive to those inputs). In addition, you will learn how to build a decision model, how to make better decisions in the presence of uncertainty, and how to deal with multi-stage decisions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001, (STAT 5301 and MIS 5301), or (STAT 5401 and MIS 5401))

**STAT 5606. Data: Care, Feeding, and Cleaning in Python. 3 Credit Hours.**

Data is ubiquitous. Real data is also "dirty." Analysis of unclean data can significantly distort the results of analyses, and it can reduce or eliminate the benefits of an information-driven strategy. Thus, the first step in generating good information from data is to "clean" the data. Substantial research has been done on procedures to automatically or semi-automatically identify--and, when possible, correct--errors in large datasets. Even after data have been "scrubbed" the datasets are frequently not in the correct configuration for analysis. Data combination and manipulation involves techniques for merging and summarizing datasets, extracting subsets of data, and transforming variables within the datasets. In this course we explore tools and techniques for cleaning raw data (fixing errors, identifying outliers, etc.), extracting subsets or samples of data, merging and combining datasets, summarizing disaggregate data, and manipulating and transforming individual variables within the datasets. We will also discuss good procedures for ensuring data quality and reliability in data collection. In addition, we will discuss techniques to identify issues in data collection and how to clean the data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001 (may be taken concurrently), (STAT 5301 (may be taken concurrently) and MIS 5301 (may be taken concurrently)), or (STAT 5401 (may be taken concurrently) and MIS 5401 (may be taken concurrently)))

**STAT 5607. Advanced Business Analytics. 3 Credit Hours.**

This course builds upon the foundation in Business Analytics. In previous courses, we saw that data by itself is useless, and that it must be transformed into information in order to have value to decision makers. This course will extend your understanding of the art and science of extracting information from data into increasingly complex and "real world" data. Specifically, we will cover extensions to regression, logistic regression, hierarchical modeling, model selection, and other topics spanning the process of building and evaluating models. In addition, we will practice drawing intuition and insight from models and effectively communicating that insight in a format that can help decision-makers to make better decisions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 5001, (STAT 5301 and MIS 5301), or (STAT 5401 and MIS 5401))

**STAT 5611. Business Analytics II. 1.5 Credit Hour.**

Organizations are drowning in a sea of data. However, data by itself is useless. To have value, it must be transformed into information that can be used to make decisions. It has been shown by myriad companies that one path to success in the business arena is through superior use of information - information about customers, markets, and operations. This course extends the material presented in Business Analytics I, continuing the development of the art and science of extracting information from data. The emphasis is on using extracted information to improve business decisions. It also delves into the presentation of quantitative data using state of the art tools and techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in ((STAT 5301 and MIS 5301), (STAT 5401 and MIS 5401), or STAT 5001)

**STAT 5651. Capstone in Analytics. 3 Credit Hours.**

The capstone in analytics is the culmination of analytics-focused coursework. You will work with real data from "live" clients. Some of you will work on projects at companies for which you are interning. Others will work with MBA teams as part of our Fox Management Consulting program, providing analytics support for a live client. Others will work on primarily analytics focused projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 5801. Statistical Analysis for Management. 3 Credit Hours.**

In this course, you'll learn how to use statistics to help solve business problems throughout an enterprise. You'll examine case examples of statistical analysis in areas such as marketing, finance and management. You'll learn descriptive and inferential techniques such as regression analysis and how to analyze data and reach decisions, using statistical computer software and Excel.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 5802. Quantitative Techniques for Management. 3 Credit Hours.**

In this course you'll apply advanced quantitative techniques for managerial decision-making such as forecasting, linear programming, simulation, decision analysis, Markov chains and game theory. You'll use customized software and Excel to analyze these models extensively and apply them to decisions regarding resource allocation and other managerial problems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 8001. Probability and Statistics Theory I. 3 Credit Hours.**

Topics include basic probability theory and combinatorial problems, generating functions, random variables, probability distributions, law of large numbers, and limit theorems.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8002. Probability and Statistics Theory II. 3 Credit Hours.**

A comprehensive development of the theory of statistics, including standard distributions, sampling distributions, general theory of estimation, testing of hypotheses, statistical decision theory, order statistics, linear statistical estimation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8001.

**STAT 8003. Statistical Methods and Concepts. 3 Credit Hours.**

Introduction to applied statistics. Topics include data management, probability distributions, parameter estimation, hypothesis testing, sampling methodologies, graphical display, analysis of variance, and simple and multiple regression. Use of R, S-Plus and SAS statistical software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8004. Statistical Modeling and Inference. 3 Credit Hours.**

Design of experiments, analysis of discrete data, introduction to nonparametric methods, logistic regression, ARIMA time series analysis, bootstrapping, jackknife, robustness, and selected topics in multivariate analysis. Use of R, S-Plus and SAS statistical software.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8003.

**STAT 8031. Probability and Large Sample Theory. 3 Credit Hours.**

An advanced level theoretical course covering measure theoretic probability, some probability inequalities, statistical independence, strong and weak laws of large numbers, convergence in distribution, variance stabilizing transformations, characteristic functions and central limit theorem.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in STAT 8001.

**STAT 8101. Stochastic Processes. 3 Credit Hours.**

This is a first course in stochastic processes, with an emphasis on continuous-time models that support applications in financial mathematics and derivative evaluation. The course covers: fundamentals of probability, limit theorems, conditional expectation, change of measures, Markov chains, random walks, martingales, Brownian motion, the Ito integral, stochastic differential equations, the Black-Scholes model and its use in evaluating a variety of financial derivatives.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 8001 or STAT 8112)

**STAT 8102. High Dimensional Inference. 3 Credit Hours.**

This course covers current topics on high-dimensional statistical learning methods for data science with large and complex data sets. Methods exploiting sparsity and other data and model structures are introduced including penalized regression approaches for linear models, generalized linear models, and high-dimensional classifications. Other selected high-dimensional statistical learning topics will be discussed including tree methods, boosting, random forest, neural networks and unsupervised learning.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8003.

**STAT 8103. Sampling Theory. 3 Credit Hours.**

Theory and application of sampling from finite populations. Topics include random, stratified, cluster, and systematic sampling; estimation of means and variances; optimal allocation of resources; problems of nonsampling errors; and ratio and regression estimation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8003.

**STAT 8104. Mathematics for Statistics. 3 Credit Hours.**

Vector spaces; linear independence of vectors and basis; matrices and algebraic operations on matrices; determinants; rank of a matrix; inverse of nonsingular matrices; linear equations and their solutions; generalized inverse of a matrix; eigen values and vectors of matrices; diagonalization theorems; quadratic forms and their reduction to sum of squares; Jacobians.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8105. Univariate Time Series Analysis. 3 Credit Hours.**

Theory and application of univariate time series analysis. Includes both time domain and frequency domain methods. Considers stationary and nonstationary linear processes, time series model building, forecasting, unit root test, intervention models and outlier detection, spectral theory of stationary processes, spectral windows, and estimation of spectrum.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8002.

**STAT 8106. Linear Models I. 3 Credit Hours.**

Covers the basic theory and practice of generalized linear models (GLM), such as the logistic, Poisson and gamma regression, as well as models for multilevel or longitudinal Gaussian responses, such as the hierarchical linear model and linear mixed model. The students will need to work with R and SAS throughout the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8002, STAT 8004, and STAT 8104.



**STAT 8107. Design of Experiments I. 3 Credit Hours.**

Principles of experimental designs, completely randomized designs, multiple comparisons, randomized block design, latin square design, missing value problems, analysis of covariance, and factorial experiments.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8004.

**STAT 8108. Applied Multivariate Analysis I. 3 Credit Hours.**

Multivariate normal distribution; marginal and conditional distributions; estimation of population mean vector and dispersion matrix; correlation, partial correlation, and multiple correlation coefficients; Hotelling's T<sup>2</sup>; MANOVA; discriminant function; repeated measurements analysis; principal components and canonical correlation; factor analysis; and multidimensional scaling.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8003.

**STAT 8109. Applied Statistics and Data Science. 3 Credit Hours.**

PART I: Elements of a scientific problem, including estimands, the role of statistical models, the language of statistical modeling, notions of likelihood, finite vs infinite populations, and types of analysis. PART II: Elements of statistical modeling, including transformation theorems, sufficiency, 1-parameter and multi-parameter models, multivariate Normal models, Dirichlet-multinomial models, hierarchical models, generalized linear models, mixture models, text analysis, social network analysis. PART III: Concepts and algorithms for estimation and inference, including information, statistical efficiency, asymptotic approximations, maximum likelihood estimators, method of moments estimators, Bayesian estimators, empirical Bayes vs full Bayes estimation strategies, expectation-maximization algorithm, Monte Carlo approximations, Gibbs samplers, Metropolis-Hastings samplers, prior and posterior predictive checks, and Bayesian vs. frequentist coverage. Data Science visitors: The course will feature a series of short talks and Q&A sessions with prominent data scientists spanning academia, government, and the Tech industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8111. Survey Techniques for Business Applications. 3 Credit Hours.**

Application oriented. A course dealing with statistical and nonstatistical aspects of organizing a sample survey. Included are discussions of objectives, measurement, sample selection, pilot testing, data collection, data editing, summarization and interpretation of results in addition to describing the various sampling schemes. Students may be required to plan and execute a survey.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8112. Statistical Methods for Business Research I. 3 Credit Hours.**

Part I of a doctoral level, one-year sequence of courses for the PhD students in Business Administration program. The course covers a variety of statistical methods useful in business research, such as: multiple regression analysis, ANOVA, linear models, analysis of covariance, logistic regression, principal component analysis, exploratory factor analysis and canonical correlation analysis. Emphases are placed on rationales, assumptions, techniques, and interpretation of results from computer packages. Relevant mathematical results will be presented, but proofs or abstract arguments shall be avoided. The lectures cover computer usages, such as R and/or SAS, and the students are expected to work with SAS (or equivalent packages) throughout the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8113. Statistical Methods for Business Research II. 3 Credit Hours.**

Part II of a doctoral level, one-year sequence of courses for the PhD students in Business Administration program. Topics covered in this course are: discriminant analysis, confirmatory factor analysis and structural equations modeling, time-series intervention analysis, survival (event history) analysis, MANOVA, multivariate profile analysis, hierarchical linear models (HLM), linear mixed models (LMM) for multilevel data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8112.

**STAT 8114. Survival Analysis I. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8115. Nonparametric Methods. 3 Credit Hours.**

A thorough course in nonparametric statistics. Estimation and testing of hypothesis when the function form of the population distribution function is not completely specified.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8003.

**STAT 8116. Categorical Data Analysis. 3 Credit Hours.**

Sampling models and analyses for discrete data: Fisher's exact test; Logistic regression; ROC analysis; Log-linear models and Poisson regression; Conditional logistic regression; Cochran-Mantel-Haenszel test; Measures of agreement between observers; Quasi-independence; Multinomial logit models; Proportional odds model; Association models; generalized estimating equations (GEE); generalized linear mixed model (GLIMMIX); GSK models; Composite link functions. The students will need to work with R and SAS throughout the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8003.

**STAT 8117. Clinical Trials. 3 Credit Hours.**

Introduction to the special problems associated with medical trials on humans. Topics include randomization, sample-size determination, methods for early trial termination, and tests for superiority, equivalence, and non-inferiority. Also discussed are choice of endpoints, control, side effects, use of historical data, meta-analysis and ethics of experimentation on humans.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 8002 or STAT 8004)

**STAT 8121. Statistical Computing and Optimization. 3 Credit Hours.**

Use of computers in the solution of statistical problems. Topics include: floating point architecture, random number generation, design of statistical software, computational linear algebra, numerical integration, optimization methods.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8004.

**STAT 8122. Advanced SAS Programming. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (MATH 1042 or MATH 1942), STAT 8001, and STAT 8002.

**STAT 8123. Time Series Analysis and Forecasting. 3 Credit Hours.**

A time series analysis with financial and business applications. Topics include important univariate and multivariate time series methods including ARIMA models, intervention analysis, outlier detection, time series regression, volatility and GARCH models, vector time series and co-integration. Projects using software are required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (STAT 8002 or STAT 8004)

**STAT 8207. Design and Analysis of Complex Experiments. 3 Credit Hours.**

Experimentation has become a strategic foundation for modern corporations. This course focuses on strategies for designing, executing, and analyzing experiments on large populations, as well as dealing with large collections of concurrent experiments. We will consider settings where units of analysis may be assigned treatment in multiple experiments that are running concurrently. The course is largely based on critical reading of recent articles and technical reports. The emphasis will be on the design of complex field experiments that produce actionable results, and in working with experimentation platforms at large IT companies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8109.

**STAT 8515. Data Wrangling and Curation. 3 Credit Hours.**

This course will explore advanced tools and techniques for cleaning "raw" data. Real data is ubiquitous, but it is almost always "dirty". Analysis of "dirty" data can significantly distort results, which can reduce or eliminate the benefits from an analytic solution. The first step in extracting actionable information from data is to "clean" the data, and this process frequently occupies the majority of the analysis time. In this course, we will provide an in-depth look at the techniques that can be used to identify and deal with problematic data. Even after data have been "scrubbed", datasets are frequently not in the correct configuration for analysis, and we will explore techniques for merging and summarizing datasets, extracting subsets of data, and transforming variables. We will also discuss procedures for ensuring data quality and reliability in data collection.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 8982. Independent Study. 1 to 3 Credit Hour.**

Special study in statistics theory and methods under the supervision of a graduate faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 9001. Advanced Statistical Inference I. 3 Credit Hours.**

Background: Matrix Theory Estimation: Sufficiency, Completeness, UMVU Estimation, Information Inequality, Invariance Principle, Bayes Estimation, Admissibility, Maximum Likelihood Estimation, Large Sample Properties of Estimators.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8001 and STAT 8002.

**STAT 9002. Advanced Statistical Inference II. 3 Credit Hours.**

Testing of Hypotheses: Neyman-Pearson Fundamental Lemma; Uniformly Most Powerful Tests, Confidence Intervals, Likelihood Ratio Tests; Asymptotic Tests, Multiple Hypotheses Testing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STAT 9090. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**STAT 9101. Multivariate Time Series Analysis. 3 Credit Hours.**

Theory and application of multiple time series analysis and special topics. Covers transfer function models, time series regression with autocorrelated errors, ARCH and GARCH models, vector time series models, cointegration, state space models, long memory processes and nonlinear processes, time series aggregation and disaggregation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8105.

**STAT 9103. Stat Lrng & Data Mining. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8001, STAT 8002, STAT 8003, and STAT 8004.

**STAT 9106. Linear Models II. 3 Credit Hours.**

Continuation of Stat 8106, covers the theory and practice of analyzing multivariate repeated/correlated non-Gaussian responses, with or without missing observations. Missing at random (MAR) models; informative missingness; EM algorithm; multiple imputations; quasi-likelihood estimation; generalized estimating equations (GEE); transition models; Gibbs sampling; Markov Chain Monte-Carlo (MCMC) technique. The students will need to work with R, SAS and WinBugs throughout the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8106.

**STAT 9107. Design of Experiments II. 3 Credit Hours.**

Covers symmetric and asymmetrical factorial experiments, fractional replication, split plot design, balanced and partially balanced incomplete block designs without and with recovery of interblock information and lattice designs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8107.

**STAT 9108. Multivariate Analysis II. 3 Credit Hours.**

A study of specialized topics in multivariate analysis.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8002 and STAT 8108.

**STAT 9114. Survival Analysis II. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 8114.

**STAT 9116. Statistical Genetics: An Advanced Graduate Course. 3 Credit Hours.**

An advanced level graduate course in statistical genetics covering the basic concepts of allele, gene, genotype, phenotype, Hardy-Weinberg equilibrium, linkage analysis, QTL mapping using marker analysis, functional mapping for longitudinal traits, analysis of ultra-high dimensional data, genome-wide association studies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B in STAT 8001, STAT 8002, STAT 8003, and STAT 8004.

**STAT 9180. Seminar in New Topics in Statistics. 3 Credit Hours.**

Special topics in Statistics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 9183. Directed Study in Statistics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 9190. Seminar in New Topics in Statistics. 3 Credit Hours.**

Special topics in Statistics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 9994. Preliminary Examination Preparation. 1 Credit Hour.**

Preparation for preliminary examinations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 9998. Pre-Dissertation Research. 1 Credit Hour.**

Proposal design. Registration required until approved proposal is on file at the Graduate School.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STAT 9999. Dissertation Research. 1 to 12 Credit Hour.**

For students elevated to candidacy and doing their dissertation research. Registration required until successful defense and graduation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Strategic Communication (STRC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**STRC 8102. Legal Issues in Communication Management. 3 Credit Hours.**

Grounding in legal issues that bear on communication: governmental regulation of speech; deceptive advertising; product liability class action; defamation and commercial speech; publicity and privacy; trademarks, patents, trade secrets, and copyrights; obscenity and indecency; journalistic privilege, free press, fair trial, and access to information. Note: Core course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STRC 8800. Spec Topics in Comm Mgmt. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STRC 8985. Teach in Higher Ed:Comm. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STRC 9001. Crisis Communication and Issue Management. 3 Credit Hours.**

This course examines a wide range of issues and crises, including natural and man-made disasters, defective products, executive malfeasance, and activism. It focuses on managing issues before they become crises, mediating conflict with various publics, putting together a crisis plan, dealing with the unexpected during a crisis, and rectifying long-term effects of crises.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STRC 9004. Government Relations and Lobbying. 3 Credit Hours.**

This course examines the government relations and lobbying functions within non-profit and publicly traded organizations, including corporations, special interest groups, and other organizations. It covers the history of lobbying, different types of lobbying and lobbyists, the role of lobbying within a democratic government, and building a career in government relations. This is a hands-on course; student projects include lobbying a state or federal issue.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**STRC 9054. Directed Readings in Communication. 1 to 4 Credit Hour.**

Independent study. A specific faculty member must agree to serve as supervisor before the student registers. Special form needed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**STRC 9101. Capstone Project in Communication Management. 3 Credit Hours.**

In-depth, original analysis of a professional issue in communication management. Required of all MS students in their final semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Strategic Management (SGM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SGM 5001. Mng New & Small Enterprs. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5002. Business Plan Developmnt. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5051. Business Strategy in a Global Environment. 3 Credit Hours.**

This course is designed to present international strategic management concepts and the field of global industry competitive analysis. This seminar combines multiple attributes and analytical frameworks of strategic management to assess an industry and the relevant competitor strategies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5103. Management of Technology and Innovation. 3 Credit Hours.**

This course is designed to give students insights into the technological, customer, and management issues that must be considered when developing new products or technologies. This course offers students the chance to understand and apply a number of analytical, decision making, management, and planning tools that can be used to guide the development of new products (and services) from idea to the marketplace (invoice). It is relevant to students who would like to more systematically manage and execute their own innovative ideas as well as those that wish to lead new venture, new product development, and research and development processes and groups. The course will prepare students to take the certification exam for the Product Development Management Association (PDMA) New Product Development Professional (NPDP) Certification.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5104. Management of Growth, Decline and Turnaround. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5001, ECON 5001, STAT 5001, MKTG 5001, MIS 5001, FIN 5001, and MSOM 5001)

**SGM 5105. Industry Competitive Analysis. 3 Credit Hours.**

An applied examination of recently developed techniques for assessing industry competitive forces and devising appropriate business strategies. Topics include: analysis of industry trends, recognizing types of industries, developing strategic maps of industry competitors, and learning to utilize industry information sources, among others. Students will be required to conduct an in-depth analysis of at least one industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5001, ECON 5001, STAT 5001, MKTG 5001, MIS 5001, FIN 5001, and MSOM 5001)

**SGM 5107. Management of Mergers and Acquisitions. 3 Credit Hours.**

Examines managerial aspects of growth through mergers and acquisitions. Examines pre-merger analysis, strategies for negotiation and bidding, as well as post-merger integration of target firms. Utilizes several techniques valuable for acquisition analysis, including financial valuation techniques and industry analysis. Case studies develop students' analytical skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5108. New Venture Creation. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in (ACCT 5001, ECON 5001, STAT 5001, MKTG 5001, MIS 5001, FIN 5001, and MSOM 5001)

**SGM 5116. Non-Profit Governance: Preparing to Sit on a Board of Directors. 0 to 3 Credit Hours.**

Participation on a nonprofit board is a rite of passage for business leaders. The course provides a rich opportunity to study governance, risk management, and leadership development at a strategic level. It also offers rich professional development opportunities and the satisfaction of sharing professional skills with mission-driven organizations. Through active involvement with the board of a nonprofit organization, enriched by a management project for the organization, students will consolidate their MBA or MS skills while exploring issues related to governance, risk management, impact measures and executive development and motivation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5131. Social Entrepreneurship - Innovative Approaches to Achieving Positive Social Impact. 3 Credit Hours.**

Private enterprise (business) is a powerful tool for stimulating innovation and investment - but often neglects community, social and environmental costs. Public enterprise (government) is useful in allocating public resources and serving the disenfranchised - but often at the cost of efficiency and creativity. Social entrepreneurship promises to combine the energy, discipline and appetite for innovation of private enterprise with the inclusiveness and far-sightedness of public enterprise to solve pressing social, environmental and economic problems. Social entrepreneurship sounds wonderful - but how does it play out in reality? And what does it take to manage multiple bottom lines (people, profit and place) effectively? In this highly interactive and experiential course, students will have a chance to interact with, learn from, and work on business challenges for social entrepreneurs as well as the entrepreneurial ecosystem that supports social impact investing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5133. Management Consulting: Principles and Practices. 3 Credit Hours.**

Whether your goal as a management consultant is to join a dedicated firm, operate in-house, or launch your own practice, the factors for success are similar. This course focuses on the skills (hard and soft), methods, and practices of successful consultants. Consulting is highly practical; therefore, the course includes many practical exercises with content from experts in the field. Research projects and project simulations will be evaluated by senior practitioners from industry, including the course instructor. A personal assessment and individual development plan will help you identify and map the best path to a career in consulting. [Note: This course would also benefit aspiring entrepreneurs and students preparing for the capstone.]

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5134. The Consulting Engagement: Managing Projects and Change. 3 Credit Hours.**

In management consulting, project management and change management are two sides of the same coin. This course presents both the tools and practices successful consultants use to manage both the process and the people. The engagement management component of the course focuses on three critical activities: 1) From RFP to scope to exit interview, managing the client, 2) Project planning across the boundaries that divide consultant and client, and 3) How to analyze, manage and report upon the financial components of a project, including project ROI. The second half of the course addresses the need for leaders to manage employees and other key stakeholders through transformational change, and the role the consultant plays in this process. By understanding the challenges of managing people through complex change, as well as the methodologies, tools and proven approaches of successful consultants, students can ensure enterprise-wide understanding, buy-in and collaboration throughout the transformation process.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5135. Innovation Intelligence: Plan, Build, Protect, and Monetize a Technology / Innovation Portfolio. 3 Credit Hours.**

Almost all firms want to be more innovative, however, few succeed at profiting from their innovations. Furthermore, some of the most interesting technological inventions are commercial failures. This course trains students in approaches to strategically manage an innovation or technology-focused organization or consultancy. Developing 'intelligence' in a domain requires accessing relevant information, analyzing it using appropriate approaches, and making informed strategic decisions based on your analysis. This course will demonstrate a number of tools and perspectives that are critical to strategically plan, coordinate, and make decisions relevant to innovation, research and development (R&D), and technology or new product development. You will learn to systematically assess R&D / technology trends and risks, scout for development opportunities, identify technology and product leaders and uncover their strategies, protect and leverage your portfolio of innovations/technologies, and build a coherent innovation plan that aligns with your organization's strategy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5136. Principles of Strategy and Management. 3 Credit Hours.**

Whether you are interested in being a high-performing employee, a manager within an organization, an innovator, or a successful entrepreneur, understanding the core business principles of strategy and management is critical to helping you achieve your goals. This course will provide an overview of traditional as well as cutting-edge, innovation-focused perspectives and tools including: industry and stakeholder analysis, competitive advantage, business models, profitability, organizational design, and the evolving roles of managers and leaders. This is an introductory course for anyone without formal business training or education. It is utilized as an introductory course in a number of certificates and masters programs and can help individuals considering whether or not a Fox graduate degree is interesting or appropriate for them. NOTE: Not open to MBA students but available to all other majors / all schools and colleges.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** May not be enrolled in one of the following Degrees: Master of Business Admin.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5137. Entrepreneurial Thinking and New Venture Creation. 3 Credit Hours.**

Whether students are aspiring entrepreneurs bent on launching new businesses or managers bent on growing profitable businesses, the module seeks students to "think big" and "think out of the box". The central focus of the module is on two key success factors: the entrepreneur; and his/her ability to create and recognize opportunities. It examines the concepts, skills and know-how, information, attitudes and alternatives that are relevant for entrepreneurs engaged in start-up and early-stage ventures, managers of new ventures within established organizations, and the relevant stakeholders. Key questions raised and answered in the module include: What are the key aspects of new venture creation process? Where can you look for new opportunities? How do you evaluate an opportunity? How do you generate, evaluate, and evolve your ideas? How do new ventures achieve growth? What are the key elements of deal structure? How should you structure a deal? What are the strategies for harvesting new ventures? What are the unique properties of entrepreneurs and their teams?

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**SGM 5138. Global Innovation Strategy: Creating Agile, Innovative, Globally-Competitive Organizations. 3 Credit Hours.**

This course discusses innovation-based strategies as a source of competitive advantage as well as how to build and design agile / adaptive organizations that excel at innovation. Major topics include understanding how disruptive innovations impact industries, designing an organization that encourages innovation and embraces change, balancing performance and innovation demands, and organizing to take advantage of various sources of innovation. In addition, students will be exposed to a number of cutting-edge topics relevant to next-generation strategy: global R&D and emerging market innovation, organizational learning and knowledge management, and open innovation approaches that engage both your customer base as well as your value system to innovate and create unparalleled value.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5139. Lean Entrepreneurship / Innovation: Fast & Frugal Methods to Launch Startups & Test Innovative Ideas. 3 Credit Hours.**

The Lean Startup or Lean Launchpad methodology has transformed the way that entrepreneurship is taught and practiced and has even changed how the most innovative organizations in the world invent new products and services or reinvent themselves via innovation. In this experiential, hands-on course students will learn the 'customer-development' approach that serves as a counterpoint to traditional 'product development' undertaken in most organizations. Students will be immersed in the iterative (build-measure-learn) process and will learn how to accelerate the process via creative approaches to designing minimum-viable products, prototypes, and experiments. Furthermore, they will learn how to more systematically identify and test assumptions so that they can make decisions to pivot, proceed, or restart based on customer insights and evidence gathered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5142. Business Model Innovation. 3 Credit Hours.**

A business model describes how an organization creates and captures value - a business model is like the DNA of an organization. Business model tools and perspectives have recently advanced at a dramatic pace and business model innovations are one of the most significant sources of industry disruption. This course uses the business model canvas methodology as well as the strategic revolution/blue ocean strategy approaches to generate rule-breaking business models. In addition, building on this business model foundation, we will explore theories of innovation characteristics, adoption, and diffusion to provide practical advice and techniques for finding first customers, implementing innovative ideas, and driving acceptance by modifying your products, services, and business model.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5144. Creativity Unleashed: Harnessing Creativity to Solve Real-World Innovation Challenges. 3 Credit Hours.**

We all face an innovation imperative - innovate or die. Innovation fuels our ability to be competitive - both on a corporate level and on a personal one. However, innovation remains elusive to many organizations and individuals. Students in this course will shift both their perspective and their behaviors as they learn a set of creativity tools that they will apply to real-world innovation challenges during class. This course delves deep into critical creativity topics like problem formulation, divergent thinking techniques, idea evaluation and convergent thinking, evolving ideas to increase impact and feasibility, and championing your ideas to find acceptance. No matter what career or profession you are going into, being familiar with creative approaches and techniques will help you to be more valuable, employable, innovative, and entrepreneurial. Developing your competencies in this area might be one of the most important investments you can make in yourself. Creativity has become one of the most sought after characteristics of employees and managers and is an important predictor of executive success. Creativity is not simply something you have, it is something that you can develop.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5145. Plan, Pitch, and Fund an Entrepreneurial Start-Up. 3 Credit Hours.**

For many entrepreneurs securing funding is the most challenging phase of the entrepreneurial process. Although more options than ever before are available for early stage funding, a substantial portion of the entrepreneurial funding landscape involves appealing to potential investors. Increasingly accelerator programs, incubators, and a number of other key players in the entrepreneurial ecosystem are using the same criteria as angel and venture capital investors for selecting investment-worthy ventures. This course focuses on positioning and presenting your venture or concept such that it has the greatest chance to be funded. Your 'pitch' or investor presentation is a critical phase in the entrepreneurial process, and you should not underestimate how important it is to the success or failure of your company. The investor presentation is unlike any other business presentation you've done: investors are a most demanding and impatient audience. It's a fact that many companies that truly deserve to be funded don't get funded because they can't communicate what they have well enough to engage investors.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5148. Open Innovation and Managing Strategic Alliances. 3 Credit Hours.**

It is said that competition is no longer company-vs-company but business ecosystem against business ecosystem. Unbridled advances in technology, connectedness, globalization, and fragmentation of value chains across industries have transformed the relationship between companies, customers, partners, and competitors. Increasingly the knowledge and specialization required by firms to produce new products, gain new resources including strategic intelligence, and to place bets across nascent markets resides outside of firms' boundaries. To be successful in this context, firms - from established industry giants to entrepreneurial new ventures - must build comprehensive open innovation strategies that engage and mobilize external stakeholders to productive and innovative ends. This course addresses the distinct challenges and opportunities posed by the confluence of digital community (i.e. "the crowd"), powerful and expanding data gathering and analytics, and the ambiguous boundaries of successful modern firms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5170. Special Topics. 1 to 6 Credit Hour.**

Special topics in Strategic Management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Repeatability:** This course may be repeated for additional credit.

**SGM 5180. Special Topics in SGM. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 5182. Independent Study. 1 to 6 Credit Hour.**

Only available to MBA/MS students. Course provides an opportunity for students to explore the creation of an idea for a new eBusiness, as well the planning and research involved in moving from the idea stage to the startup stage. This course involves preparation of a business plan on the new eBusiness idea. In addition, this course provides students with an on-going platform to develop and integrate concepts presented in previous and concurrent seminars. Prior to taking this course, students will be exposed to an entrepreneurship module in the Fall semester. This module is designed to provide students with an opportunity to present preliminary ideas for a new eBusiness endeavor to be expanded on during this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 5190. Special Topics: General & Strategic Management. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 5282. Independent Study. 1 to 3 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 5411. Organizational Strategy. 3 Credit Hours.**

To achieve business success, managers must develop the resources and capabilities needed to gain and sustain advantage in competitive markets. The way in which organizations attempt to develop such competitive advantage constitutes the essence of their strategy. This course introduces the concept of strategic management and considers the basic direction and goals of an organization, the external environment, industry and market structure, and organizational strengths and weaknesses. The emphasis of the course is on the development of gestalt thinking regarding organizational challenges, as well as the tools and methods required to address those challenges.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School.

**Co-requisites:** FIN 5411.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C in BA 5412 and ACCT 5411.

**SGM 5501. International Management. 3 Credit Hours.**

This course is designed to present the break-through concepts to understand and address the complexities and opportunities associated with a turbulent global business context. For example, students will analyze the economic, financial, and human consequences resulting from the rise of emerging markets, the 2008 Global Financial Crisis, and the 2020 global pandemic. This 3-credit course will focus on the formidable challenges and opportunities in managing internationally for any manager, regardless of location (US or overseas). The course will draw from different disciplines to enhance management skills, cross-cultural literacy, negotiation, decision-making under uncertainty, and leadership, in particular.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5801. Contemporary Corporate Strategy. 3 Credit Hours.**

In this course, you'll increase your grasp of strategic management concepts as they relate to for-profit, not-for-profit and professional organizations. You'll enhance your ability to analyze an industry and develop relevant enterprise-level strategies. In particular, through several real-world case studies, you'll learn about cutting-edge developments in e-business and e-business strategies. You'll apply the concepts to organizations that you and other program participants work for or are interested in.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5882. Independent Study. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 5890. Special Topics. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 5901. Mng New/Small Enterprise. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 5902. Managing Bus Planning. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 9001. Seminar: Strategic Form - Environmental Analysis. 3 Credit Hours.**

A critical evaluation of the paradigms, theories, and research approaches as well as the current state of knowledge in strategic management. The courses focuses specifically on the theory and current state of research in the analysis of relevant environments and the subsequent formulation of strategy within corporate entities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 9002. Seminar: Administrative Strategic Decisions. 3 Credit Hours.**

Design of systems to implement decisions. Examines concepts and theories of organizational design and processes required to transform strategic decisions into action and desired results. The current research literature in the area of organization decision making is emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 9003. Seminar: Management Control. 3 Credit Hours.**

Survey of control theory and research as it relates to organizational behavior. Examines managerial practices and organizational processes which have the potential effect of achieving strategic goals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 9011. Proseminar in Strategy and International Business. 3 Credit Hours.**

The Proseminar is intended to give the doctoral students in Strategic Management and International Business concentrations a head-start on embedding themselves into the scholarly community at the Fox School, as well as to provide a platform for integrating their early coursework to their research interests and sharpen their vision for the chosen academic career. Specifically, the course attempts to provide an integrative framework to build your profile as an impactful academic. In particular, we will systematically go through the many roles that you will take on as an academic. We will also focus on developing your critical thinking skills in reading research papers, to provide an opportunity to assess your technical skills in empirical research and to build effective presentation skills. The course integrates the departmental seminar series to help you assimilate, critique, and leverage them to generate your own research ideas. The Proseminar culminates with a presentation of your vision statement and a proposal for your first summer research paper.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 9090. Spec Topic Strategy. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 9183. Directed Study in Mgt. 1 to 6 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**SGM 9211. Theor Fndns in Entrepr. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**SGM 9212. Strategic Management of Technology and Innovation. 3 Credit Hours.**

This doctoral seminar provides an introduction to the phenomenon of innovation from the strategic management perspective. By introducing some of the basic theories and concepts of innovation research, this seminar serves as a foundation for building our understanding of how organizations create new innovations, engage in search, design their organizations optimally, and manage change. The emphasis of the seminar is on understanding the main theories on innovation and technology strategy and synthesizing research in this area. We will also develop skills to appreciate and construct theoretically rich empirical research designs.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Supervisory Certification Program (SUPV)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SUPV 5601. Assessment of Curriculum and Instruction. 3 Credit Hours.**

An introduction to procedure and methods used in the evaluation of curricula and programs in school settings. This course comprises the general supervisory component and are required for most students. This course also meets the curriculum requirements for principal certification.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Supply Chain Management (SCM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**SCM 5101. Supply Chain Analytics. 3 Credit Hours.**

Supply chain analytics is unique and, to some degree, represents a paradox because it is concerned with one of the oldest and also the most newly discovered activities of business. This course will assist you in understanding the importance of data in the supply chain and how organizations can gain competitive advantage using the analytics tools at various stages in the supply chain. This course includes applications of the tools learned in earlier courses.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**SCM 5102. Supply Chain Logistics and Distribution. 3 Credit Hours.**

This course will cover the three important building blocks of an effective supply chain - transportation, inventory, and warehousing management. Have you ever wondered how Amazon pulls off that last-minute birthday gift or home article at your doorstep when you need it? Answer - it is made possible due to a well-developed network of transport systems, smart technologies and dedicated personnel. This course will begin with an overview of the freight logistics. It will enable you a broader understanding of the five primary modes of freight transportation and how freight moves at the domestic and international level. You will get acquainted with different transportation market structures, cost structures, and pricing strategies. You will learn about the new and innovative sustainability efforts currently underway in transportation, and lastly, study some of the quantitative tools and techniques required for designing transport networks to achieve cost minimization while meeting the customer demand. After learning about the freight transportation systems, the course will delve into some inventory management philosophies, and their quantitative and qualitative aspects. When thinking of Amazon, you may imagine that there are a number of factors that go into serving up the right product to the right customer! While transportation is one of them, inventory management is a large part of their business. In this part of the course, you will learn the mathematical models used for inventory ordering and replenishment decisions. You will critically approach inventory management decisions when faced with uncertainties. You will also acquaint yourselves with good warehousing practices that leads to new market opportunities while meeting customer demands and expectations. Understanding the different material, information, people management tools, and examining the costs and benefits associated with different warehousing designs and processes will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**SCM 5103. Strategic Sourcing and Procurement. 3 Credit Hours.**

Many forces, such as globalization, new technologies, new materials, government policy and regulations, political and economic unrest, environmental change and better informed consumers, all must be considered for their impact on the procurement and steady supply of the materials and services a firm needs to operate. A company's supply chain consists of various entities, including suppliers, manufacturers, distributors, logistics providers, and retailers to fulfill customer demand. Aside from the acquisition of materials, strategic procurement is also responsible for securing and maintaining the various relationships among and across this chain, such as third-party logistics providers and contract manufacturers. Sourcing is identifying potential suppliers, while procurement involves purchasing from those sources, with a goal of corporate strategy congruence. The proposed sourcing and procurement course will: Provide an understanding and hands-on practice of how firms organize for strategic procurement, pass through the sourcing process (from development of a procurement strategy, through understanding the environments surrounding material and service needs, through source identification, selection, and monitoring), ending with supplier development; Address what firms must do to achieve a competitive advantage from their procurement and sourcing processes, with a focus on the impact of procurement and related supply chain decisions on supply chain finance; Show how firms build enduring supply chain relationships across the entire supply chain; Expand beyond traditional boundaries of for-profit to for-profit procurement to explore non-profit and government procurement; Focus on areas such as but not limited to sustainability, risk management and supplier diversity.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**SCM 5182. Independent Study. 1 to 3 Credit Hour.**

Study in particular aspects of supply chain management under the direct supervision of a graduate faculty member.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

# Surgery (SURG)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

## **SURG M122. Common Surgical Problems. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

## **SURG M123. Laparoscopic Surgery. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

## **SURG M125. Intro to Clin Gen Surg. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

## **SURG M151. Intro Trauma Surgery. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

## **SURG M153. Introduction to Vascular and Endovascular Surgery. 0 Credit Hours.**

The course will include an introduction to the basic tenants of vascular and endovascular surgery. Principles discussed will include, but not be limited to: arterial and venous disease; the most common arterial and venous maladies encountered in vascular surgery; introduction to open vascular surgery with discussion of vessel control and bypass/replacement methods, and indications for this procedure; basic introduction to endovascular surgery and its principles; dialysis access; venous disease; the vascular history and physical exam.

**Repeatability:** This course may be repeated for additional credit.

## **SURG M166. Intro Cardiac Surgery. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

## **SURG M201. Introduction to Oral/Maxillofacial. 0 Credit Hours.**

This course is an introduction to the principles of Advanced Oral and Maxillofacial Surgery. It is intended to facilitate the continuation of basic biomedical sciences and clinical skills into subspecialty level clinical patient care. All presentations are designed to utilize the available and most recent clinical and scientific evidence.

**Repeatability:** This course may be repeated for additional credit.

## **SURG M203. Introductory Elective. 0 Credit Hours.**

This generic first and second year Surgery elective serves as an introduction to a special topic in the Department of Surgery. Topics vary from semester to semester and may include an extension of a content area already covered in the required curriculum, an introduction to a new topic or research issue, or exposure to a clinical discipline. First and second year electives are optional and do not impact graduation requirements. Electives are schedule for seven two-hour sessions each, for a total of fourteen contact hours. Student interest and faculty availability determine topics offered each semester.

## **SURG M281. Intro to Plastic Surgery. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

## **SURG M300. Surgery Elective. 0 Credit Hours.**

This course will enable students to develop a basic understanding of the fund of knowledge and types of medical problems seen in this specialty; to develop a basic understanding of the medical decision making process involved in the practice; and to develop an understanding of and practice of medical interpersonal communication and professionalism.

**Repeatability:** This course may be repeated for additional credit.

**SURG M350. Surgery. 0 Credit Hours.**

**Course Attributes:** M6

**Repeatability:** This course may not be repeated for additional credits.

**SURG M351. Career Exploration of Thoracic Surgery. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**SURG M353. Career Exploration of Trauma Surgery. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**SURG M363. Career Exploration of Vascular Surgery. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**SURG M365. Career Exploration of Surgical Oncology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**SURG M382. Career Exploration of General Plastic Surgery. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**SURG M399. Career Exploration of Colon Rectal Surgery. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**SURG M400. Advanced Oral/Maxillofacial. 0 Credit Hours.**

This is an advanced course in Oral and Maxillofacial Surgery. It is intended to expand on the basic surgical knowledge and clinical skills needed for the advanced subspecialty of Oral and Maxillofacial Surgery. It helps the learner to enhance their knowledge base and develop clinical decision making, critical thinking, and clinical skills needed for a contemporary Oral and Maxillofacial Surgeon.

**Repeatability:** This course may be repeated for additional credit.

**SURG M500. Oral and Maxillofacial Surgery Clerkship I. 0 Credit Hours.**

This is a clinical rotation in Oral and Maxillofacial Surgery. It is intended to expand on the basic surgical knowledge and clinical skills towards advanced subspecialty of Oral and Maxillofacial Surgery training. It helps the learner to enhance their knowledge base and develop clinical decision making, critical thinking, and clinical skills needed for a contemporary Oral and Maxillofacial Surgeon.

**Repeatability:** This course may be repeated for additional credit.

**SURG M501. Oral and Maxillofacial Surgery Clerkship II. 0 Credit Hours.**

This is an advanced clinical rotation in Oral and Maxillofacial Surgery. It is intended to give students an additional experience in Oral and Maxillofacial Surgery training. The students will continue to enhance their knowledge base and develop clinical decision making, critical thinking, and clinical skills needed for a contemporary Oral and Maxillofacial Surgeon.

**Repeatability:** This course may be repeated for additional credit.

**SURG M503. Pediatric Oral/Maxillofacial Surgery. 0 Credit Hours.**

This is an advanced clinical rotation in Pediatric Oral and Maxillofacial Surgery. It is intended to expand on the basic surgical knowledge and clinical skills towards advanced subspecialty of Oral and Maxillofacial Surgery training with exposure to the Pediatric setting. It helps the learner to enhance their knowledge base and develop clinical decision making, critical thinking, and clinical skills needed for a contemporary Oral and Maxillofacial Surgeon.

**Repeatability:** This course may be repeated for additional credit.

**SURG M750. General Surgery. 0 Credit Hours.**

This a 4th year elective rotation for students interested in an excellent community general surgery experience. Students will work closely with affiliated surgical faculty, as there are no residents present. The rotation will focus heavily on core general surgery, with additional exposure to both trauma care and colorectal surgery. Students will have the ability to work in both the inpatient and outpatient settings.

**Repeatability:** This course may be repeated for additional credit.

**SURG M751. Surgery Night Coverage/Consultation. 0 Credit Hours.**

This elective will provide an opportunity for 4th year students interested in surgical careers the opportunity to experience night time surgical patient care. Many surgical residencies have a night-float system to remain within work hour limits, and this course will prepare our students to comfortably operate in these systems. Focus will be on performing effective patient care hand-offs and transitions, learning to triage and manage phone calls while covering multiple surgical services, and providing general surgical consultative services as appropriate. Students will mostly operate at the sub-intern level caring for patients on the hospital floors. Students may participate in operative surgical procedures as able, and provide ED and floor consultative services when possible.

**Repeatability:** This course may be repeated for additional credit.

**SURG M763. Vascular Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**SURG M764. Surgical Nutrition. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**SURG M765. Surgical Oncology. 0 Credit Hours.**

**Course Attributes:** M2

**SURG M766. Reconstructive Plastic Surgery Oncology. 0 Credit Hours.**

Student experience will focus on reconstructive surgeries after cancer. They will learn and participate in the full spectrum of reconstructive options, ranging from skin grafts to the most complex techniques using free tissue transfer. With the FCCC plastic surgeons, the student will work collaboratively with the medical team to restore normal structure and function after treatment for cancers such as breast, head and neck, and sarcomas. This course may offer the opportunity for students to learn about research related to reconstructive surgery.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of P in MEDS M447.

**SURG M767. Head & Neck Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**SURG M769. Surgical ICU (SICU) - Critical Care. 0 Credit Hours.**

The required critical care course will introduce students to the management of critically ill patients. Students are expected to follow their patients' progress and contribute to their care with supervision. Students will observe and assist as possible in procedures being performed in the ICU. Students will obtain exposure to assisted ventilation, palliative and end-of life care.

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in INTM M301, OBGY M320, PEDI M330, PSYM M340, SURG M350, NEUR M370, and FAMP M360.

**SURG M770. Cardiac Surgery. 0 Credit Hours.**

**Course Attributes:** M2



**SURG M771. Robotic Cardiac Surgery. 0 Credit Hours.**

Students will work closely with Dr. Guy and the Cardiovascular Surgery team with integral involvement in all aspects of patient care. Students will be expected to contribute to pre-operative evaluation, operative procedures, and post-operative management. Special emphasis will be placed on selective criteria and management of patients for robotic procedures vs. conventional procedures. Dedicated time with robotic simulation equipment will allow the student to advance technical skills. A presentation on a topic of interest to the student will be expected upon completion of the course.

**Repeatability:** This course may be repeated for additional credit.

**SURG M773. Transplant Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**SURG M775. Thoracic Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may be repeated for additional credit.

**SURG M777. Trauma Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**SURG M780. General Plastic Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**SURG M783. Cardiothoracic Surgery. 0 Credit Hours.**

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**SURG M789. Cardiothoracic ICU (CT-ICU) - Critical Care. 0 Credit Hours.**

The required critical care course will introduce students to the management of critically ill patients. Students are expected to follow their patients' progress and contribute to their care with supervision. Students will observe and assist as possible in procedures being performed in the ICU. Students will obtain exposure to assisted ventilation, and palliative and end-of-life care.

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in INTM M301, OBGY M320, PEDI M330, PSYM M340, SURG M350, NEUR M370, and FAMP M360.

**SURG M795. Burn ICU (BICU) - Critical Care. 0 Credit Hours.**

The required critical care course will introduce students to the management of critically ill patients. Students are expected to follow their patients' progress and contribute to their care with supervision. Students will observe and assist as possible in procedures being performed in the ICU. Students will obtain exposure to assisted ventilation, palliative and end-of-life care.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of P in INTM M301, OBGY M320, PEDI M330, PSYM M340, SURG M350, NEUR M370, and FAMP M360.

**SURG M799. Surgical Subspecialties. 0 Credit Hours.**

**Course Attributes:** M2

**SURG M870. Surgery Subinternship. 0 Credit Hours.**

**Course Attributes:** M1

**Repeatability:** This course may be repeated for additional credit.

**SURG M982. Minimally Invasive Surgery. 0 Credit Hours.**

The student will be exposed to all aspects of the multidisciplinary care of bariatric patients. This will include preoperative evaluation, operative management, surgical options, inpatient postoperative care, and outpatient follow-up. In addition to bariatric surgery the student will be exposed to all aspects of minimally invasive surgery.

**Course Attributes:** M2

**Repeatability:** This course may not be repeated for additional credits.

## Teaching English to Speakers of Other Languages (TESL)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

### **TESL 5611. Applied Language Study I: Phonology and the Lexicon. 3 Credit Hours.**

The purpose of this course is to introduce current and future teachers to the structure of the English phonology and the lexicon and to familiarize them with the key principles of language teaching and diagnostic assessment in these areas. The practicum component of the course gives students an opportunity to apply this theoretical knowledge to practice and to conduct hands-on analysis of an individual learner's pronunciation and vocabulary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **TESL 5612. Applied Language Study II: Grammar, Morphology and Classroom Discourse. 3 Credit Hours.**

The purpose of the course is to introduce current and future teachers to the structure of the English grammar and to the concepts of interactional and narrative competence. The practicum component of the course gives students an opportunity to apply this theoretical knowledge to practice and to conduct hands-on analysis of an individual learner's grammar and discourse.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **TESL 5613. Multilingual Students' Literacy Development. 3 Credit Hours.**

This course focuses specifically on the academic language needed for ELLs to be successful in U.S. schools. The course begins with an emphasis on foundational knowledge of language structures (i.e. English phonology, morphology and syntax) as well as a thorough review of key theories and principles in first and second language acquisition. The course also looks at the particular issues faced by students at different points in their education: elementary, middle and high school and the role of literacy in the content areas. With this, students will understand the complexities of reading and writing development in more than one language.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **TESL 5614. Current Approaches to Teaching English Language Learners. 3 Credit Hours.**

The purpose of this course is to introduce students to the most current methods in teaching English as a second language and English as a foreign language. The course is a hands-on course that provides many practical strategies and ideas for how to teach an effective language lesson. Students will be offered multiple opportunities to apply and reflect upon particular approaches. Course activities include lectures, discussions, small-group activities, and poster writing. Students are expected to write multiple lesson plans and share videotapes of their teaching with their classmates. The emphasis is to start where each student is and take them to the next level of professionalism as a language teacher.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

### **TESL 5615. Teaching English in a Global Context. 3 Credit Hours.**

This course explores language as a social form, focusing on the connections between language, culture, perception and linguistic globalization. Against a sociolinguistic backdrop, the course aims to raise students' consciousness to the political, socio-cultural and ethical aspects of the global spread of English. The topics covered will equip students with the basic, critical concepts needed to examine the pros and cons of the internationalization of English worldwide. At a practical level, students will be guided to reflect on and incorporate these concepts in their approaches to teaching English in the US and abroad. Through readings, discussions, international conversation partners, and reflection assignments, students will (re)conceptualize how English is taught as an international language, problematizing the issues related to "Standard English" and "NES/NNES dichotomy." Individually and collectively, the class will deconstruct notions of "one-size fits all" approach to teaching (i.e. English language as a standardized language) and explore pedagogies that take into consideration multiple varieties of Englishes. From start to finish, students will be encouraged to draw on their own experiences, link theory to practice, and collect resources to support their future careers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 5616. Designing Assessment and Curriculum for Multilingual Students. 3 Credit Hours.**

This course will guide you in understanding and applying principles of curriculum design and teacher-based assessment. Course readings, assignments and class discussions will guide you through thinking about how to best teach English language learners by adapting a curriculum that has been handed to you (i.e. a mandated curriculum), by building upon existing curricula in your instructional setting, or by creating a curriculum from scratch. In this course, curriculum is conceived of as an instructional process which includes planning, instructing and assessing. A foundational idea in this course is that assessment can and should be integrated into instruction. As such, you will learn how to sequence instruction in response to students' performance on a variety of authentic assessments. You will also learn approaches to environment and needs analysis and will experience how these analyses can inform teaching and curriculum design. Toward the end of the course, the Continua of Biliteracy will be used as an organizing framework that will guide you toward taking a critical stance when reflecting upon the curriculum you have created.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 5618. Second Language Development. 3 Credit Hours.**

The purpose of this course is to introduce key concepts in second language acquisition (SLA) and to survey state-of-the-art findings and current debates about linguistic, neurolinguistic, cognitive, affective, and social aspects of second language learning and use. Classroom discussions focus on understanding SLA concepts on linking theories and empirical research to classroom practice. This course serves as a precursor to the Master's comprehensive exam.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 5621. Contexts for Teaching and Learning Language. 3 Credit Hours.**

In this course, we explore sociocultural and political dimensions of language learning and teaching. Learning a language is not a politically neutral enterprise: Who is encouraged to learn a language and who is prevented from accessing linguistic resources are closely related to issues of power. By focusing on sociocultural, political, racial, and economic perspectives, the course emphasizes the interplay between the macro-level relations of power in society and the micro-level experiences of language learners. In other words, we are in the business of taking a critical look at why language learning is encouraged and valued in certain situations while it is discouraged and marginalized in other situations. We will draw on language learning situations both in the U.S. and in international contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 5631. Foundations of Language Teaching: Meeting the Needs of English Language Learners. 3 Credit Hours.**

This course offers students an introduction to theory, research and practice in teaching English language learners in the elementary, middle and secondary grades. The course begins with an overview of sociocultural characteristics of ELLs, legal responsibilities, and educational and language policies in the United States. Students will also learn the basic theories and principles associated with second language acquisition. Students will explore the philosophies of bilingual and ESL education as well as different program models that address the education of linguistically diverse students. Students will be introduced to an array of contemporary, research-based instructional approaches, including content-based instruction, task-based language teaching, and sheltered English instruction. As a result, they will gain an understanding of how to adapt standards-based lessons for English language learners. Through a practicum component, students will learn to design lessons and assessments for small-group instruction. Students will also develop cross-cultural competence through interactions with ELLs, teachers and school staff. NOTE: This course is only for students in the Post-Baccalaureate Program, the Graduate Certification Program and the ESL Certificate Program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 5687. Practicum for Teaching English Language Learners. 3 Credit Hours.**

The course serves as a practicum for TESOL Masters students, and involves teaching, observation, reading, and reflection. Students will team-teach for 10 weeks with a mentor teacher in the Intensive English Language Program (IELP) at Temple and meet weekly for a seminar. Specifically, under the leadership of a current IELP teacher, a pair of practicum students attend a minimum of three IELP classes per week and provide varying levels of instructional support. For the first two/three weeks of the semester, the practicum students will shadow the IELP teacher, work with him/her in developing lesson plans and materials, and observe the classes and assist with small group activities. By the fourth week of the semester, the practicum students will team-teach two of the three IELP classes each week. This practicum is designed to provide a sheltered teaching experience, where students can apply what they have learned to a real-world teaching experience. Students will be observed four times throughout the semester by a practicum "coach". This coach will observe, evaluate, and provide useful feedback to maximize students' improvement and growth as ESL teachers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 8625. Applied Linguistics. 3 Credit Hours.**

Applied Linguistics is a 3-credit graduate-level course whose goal is to provide an overview of themes and topics in applied linguistics, to highlight current debates and controversies, and to make students more informed research consumers and better academic writers. Discussions will cover a wide range of areas where applied linguists conduct research on language, including but not limited to advertising, business, economy, education, healthcare, landscape, law, military, politics, and religion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 8626. Second Language Writing. 3 Credit Hours.**

Second Language Writing is a 3-credit graduate-level course that introduces students to the teaching and learning of Second-Language Writing through the exploration of major issues in the theory, research and pedagogy. Students will learn about the scope of Second-Language Writing as a field and engage in theoretical debates about teaching second-language writers and practical responses to these debates. Students will also investigate and reflect upon their own writing processes and products, and will also conduct an investigation of a second-language writer. The course will focus on the social nature of writing as well as the nature of writing as a cognitive process. Additional topics to be studied include revision, intercultural rhetoric, plagiarism and textual borrowing, responding to and assessing student writing, reading-writing connections, and grammar feedback. This course will help students learn how to responsibly address the needs of second language writers in ESL and EFL contexts as well as university-level and K-12 contexts.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 8634. Bilingualism and Bilingual Education. 3 Credit Hours.**

Bilingualism and Bilingual Education is a 3-credit graduate-level course designed to introduce students to a range of perspectives on bilingualism and bilingual education, addressing both psycholinguistic aspects of bilingual development and sociocultural and political dimensions of educating bilingual students. Discussion topics will include: infant bilingualism; family language policy; code-switching; bilingualism and cognition; the impact of bilingualism on individuals' identity; politics of bilingual education; immersion education; heritage language maintenance; third language acquisition, and bilingualism and deaf education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 8635. Educating English Language Learners: State of Knowledge. 3 Credit Hours.**

Educating English Language Learners (ELLs) is a 3-credit graduate-level course designed to critically examine the state of knowledge on ELL education. Discussion topics will include: politics of ELL education, ELLs' oral language development, literacy development, content instruction, assessment, first language maintenance, college access and success, and use of technology in ELL education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 8636. Assessment of English Language Learners. 3 Credit Hours.**

Assessment of English Language Learners is a 3-credit course designed to cover a broad range of language assessment issues. The goal is to provide teachers of English as a second or foreign language with a basic foundation in language assessment issues; the knowledge to be able to critique language assessment instruments currently in use; and the tools to create valid classroom tests that not only reliably measure student achievement and proficiency, but also can serve to help guide instructional decisions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 8643. Research Methods in Applied Linguistics. 3 Credit Hours.**

Research Methods in Applied Linguistics is a 3-credit graduate-level course designed to familiarize students with a representative array of research methods used in the field of applied linguistics. Using concrete examples, the course will introduce students to basic principles of research design and methods of data collection and analysis from a variety of perspectives. Students will also be required to design, conduct, and write up an original research study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**TESL 8644. Current Issues in Applied Linguistics. 3 Credit Hours.**

Current Issues in Applied Linguistics is a 3-credit doctoral-level seminar designed to introduce students to cutting-edge research in the fields of applied linguistics, TESOL, and second/foreign language education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Theater (THTR)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**THTR 5012. American Musical Theater. 1 to 3 Credit Hour.**

To obtain advanced understanding of the history, forms and elements of American Musical Theater through study of the developments of the art form and exploration of the most enduring works of the genre.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5121. Musical Theater Dance Techniques. 1 to 3 Credit Hour.**

An intensive study of dance vocabulary, styles, and combinations utilized in auditions and performances for the professional musical theater stage. This course is designed to explore the unique principles and techniques characteristic of Theater Dance, as well as an approach to the audition process, storytelling, characterization, and self-expression through movement. This course also explores the significance and historical/cultural impact of the art form of musical theater, focusing on the choreographic element. Prior dance experience and understanding of the fundamentals of dance technique is required. Students will execute a ballet and jazz based warm-up, conditioning, technical skills, and various combinations drawing from the musical theater repertoire of the 20's through today.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5134. Directing for the Musical Stage. 1 to 4 Credit Hour.**

The focus of this class will be on advancing the student director's skill as pertains to the American Musical Theater repertoire. The course will address the myriad challenges of directing a musical work: including heightened stakes and storytelling techniques, intensified scheduling and management requirements of musical productions, and collaboration with musical directors and choreographers. Students will also apply and enhance acquired skills in script analysis, concept work, staging, working with actors and design elements by applying them to a challenging variety of material from the American Musical Theater.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5211. Speech for the Actor I. 1 Credit Hour.**

In the fall, students concentrate on developing the actor's awareness of speech and articulation patterns. They learn vocal anatomy and the fundamentals of articulation. It is the goal of this class to help the actor have command of the International Phonetic Alphabet in preparation for dialect work and to learn the Detail Model, the Standard American Speech of Edith Skinner and General American English. Through in-class coaching they apply this knowledge to the final poetry performances.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5212. Speech for the Actor II. 2 Credit Hours.**

Students learn the fundamentals of the Detail Model of phonetics and Standard American English. Through in-class monologue and scene coaching, they apply this knowledge to the performance of poems or speeches that are worked on in conjunction with Voice Class. Making use of the "Detail Model." Students are also coached on a Standard-American-dialect-verse piece which is scanned, scored for pitch, length, and emphasis, and worked using Edith Skinner's "Challengers for Actors in Classic Plays". Students are also continually quizzed on the International Phonetic Alphabet.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5221. Acting I. 2 Credit Hours.**

An immersion into the fundamentals of acting technique as influenced by the Stanislavski method. The goal is to reexamine the actors craft in order to develop an effective process for teaching acting to students in Higher Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5222. Acting II. 2 Credit Hours.**

Acting II is a continuation of the foundational work in Acting I with the introduction of style. The focus in the class will be on working with heightened text such as Shakespeare, the Greeks, Moliere, Restoration, Comedy of Manners, etc.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5231. Vocal Production for the Actor I. 1 to 8 Credit Hour.**

Fall term will focus on self discovery, increasing sensitivity and awareness, and finding release. We will be involved in taking personal inventory. What is our vocal history? What are our patterns of use? Where do we hold tension? How is our breath and physical life supporting or inhibiting our communication? Are there psychological / emotional issues we need to address in order to feel less inhibited in exploring our sound and claiming our own authentic voice? We will evaluate and determine where our present patterns function well and where they need to be replaced with a fuller, healthier, or more efficient way of producing and supporting sound. We will introduce the Fitzmaurice system of deconstructing and structuring.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5232. Vocal Production for the Actor II. 2 to 3 Credit Hours.**

Spring term will continue the work of the previous term. We will continue to explore the journey from breath to voice using a variety of exercises and approaches (including Fitzmaurice voice work). We will be exploring vocal possibilities with and without text. We will address support, balance, tension zones, groundedness, and energy flow as it translates into vocal energy (just how we extend ourselves in communication). We will explore the mind-body relationship of voco-physical experience through Laban concepts and work with chakras.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5241. Dance for the Actor I. 1 to 8 Credit Hour.**

**Movement:** In the fall, students are introduced to the basic principles of the Alexander Technique and begin to apply the Technique to their physical and vocal organization in simple everyday tasks. Students are introduced to kinesthetic awareness of the relationship between the head, neck, back, and pelvis, and its role in the coordination of the acting instrument. The goals of this course are to give actors greater awareness of their vocal and physical habits, to give them a psycho-physical means which they can use to live fully in the present moment, and to provide a method of working actors can use to develop a more coordinated use of their vocal and physical instruments. **Dance:** Modern Dance Technique, Lester Horton and Martha Graham. Actors learn a strong physical warm-up including Pilates. Actors are introduced to improvisation, isolations, and Laban work which culminates in short performance scenes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5242. Dance for the Actor II. 2 to 3 Credit Hours.**

**Movement:** The spring course is a continuation of TH 5241. Students learn to kinesthetically explore and intellectually understand the role of the head, spine, and pelvis in increasingly complex activities. Students explore developmental movement and begin to analyze movement patterns and relate them to basic movements covered in the 1st semester. They also continue to learn how a person's habits of Use correlate with their understanding of how the body works. Students begin to apply the Technique to increasingly athletic activities and to performance. The goal of this class is to prepare students for the vocal and physical work of their 2nd year of training and to further develop a means of working that they can use to improve their performance both on and off the stage. **Dance:** Continue work with Lester Horton. Long Neck and Space combinations. Ballet technique is introduced (Baker center work and space). Period dance is introduced as well (for example, Pavanne, Morris Dance, and Galliard). Strong warm-up technique component continues. Class also addresses Physical Gesture in Shakespeare scenes, Meyerhold and Chekhov projects.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5261. The Job Market. 1 to 3 Credit Hour.**

This class is a study of the business of working in the theater and film at all levels and positions within the entertainment hierarchy and will allow students to understand the nature and structure of arts enterprises. It consists of discussions, paper projects, guest artists, and hands-on opportunities which examine various scenarios involving actors, designers, managers, producers, and administrators to better prepare students for the challenges of a career in the arts. It will explore early career opportunities such as internships, assistantships, fellowships, and entry level positions in the entertainment industry. The course will focus not only on establishing, but maintaining a career in the entertainment industry. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5287. Rehearsal/Performance. 1 to 3 Credit Hour.**

An advanced project-based exploration of musical theater creation. Students will continue developing their thesis projects under faculty mentorship, culminating in a 29-hour-style reading at the end of term. Throughout the semester, students will write and revise their thesis projects with several sharing sessions, individual project feedback sessions, and additional check-ins and mentorship as needed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5288. Rehearsal & Performance. 1 to 3 Credit Hour.**

An advanced project-based exploration of musical theater creation. Students will continue developing their thesis projects under faculty mentorship, culminating in a 29-hour-style reading at the end of term. Throughout the semester, students will write and revise their thesis projects with several sharing sessions, individual project feedback sessions, and additional check-ins and mentorship as needed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5387. Directing Practicum I. 2 to 3 Credit Hours.**

The theory and practice of directing, focusing on short, realistic scenes. Students will study the scene as a structural unit and explore its function within the play.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5388. Directing Practicum II. 2 to 3 Credit Hours.**

The theory and practice of directing, focused on longer scenes of various styles. Students will study the scene as it reflects the values and behaviors of the larger world of the play.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5392. The Business of the Business in Theater. 1 to 4 Credit Hour.**

The Business of the Business in Theater analyzes various management, organization, publicity, marketing, job preparation, casting, and agency techniques and practices as they apply to professionals in the non-profit and commercial theater industries. It offers a foundation for students interested in developing, launching, or advancing innovative enterprises in theater. The course is a study of the business of working in the theater at all levels and positions within the entertainment hierarchy and allows students to understand the nature and structures of arts enterprises. It consists of paper projects, guest artists, and hands-on opportunities that examine various scenarios involving actors, designers, managers, producers, and administrators to better prepare students for the challenges of a career in the arts. It explores early career opportunities such as internships, assistantships, fellowships, and entry level positions in the entertainment industry. The course will focus not only on establishing, but maintaining a career in the entertainment industry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5487. Musical Theater Practicum I. 1 to 4 Credit Hour.**

An intensive, team-taught practicum that guides directors, composers, lyricists, and book writers to merge their unique artistic visions to create musical theater pieces. Songwriting craft, issues of communication between artists of different disciplines, and storytelling through music and text are emphasized. From character creation and script analysis to collaborating with writers, directors and music directors, students will have the full experience of working on new musical pieces, and will be encouraged to find their own voices and learn to merge their unique artistic visions with those of other collaborative artists to create exciting new work. Class participants work in rotating teams to write and present songs and scenes, exploring song form, dramatic structure, and the process of conceiving longer works.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5587. Musical Theater Practicum II. 1 to 4 Credit Hour.**

This course is a continuation of Musical Theater Practicum I, an intensive, team-taught practicum that guides directors, composers, lyricists and book writers to merge their unique artistic visions to create musical theater pieces. Songwriting craft, issues of communication between artists of different disciplines, and storytelling through music and text are emphasized. From character creation and script analysis to collaborating with writers, directors and music directors, students will have the full experience of working on new musical pieces, and will be encouraged to find their own voices and learn to merge their unique artistic visions with those of other collaborative artists to create exciting new work. Class participants work in rotating teams to write and present songs and scenes, exploring song form, dramatic structure, and the process of conceiving longer works.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5613. History of Decor. 1 to 3 Credit Hour.**

This is a survey course, examining the trends in architecture, furniture, and period motifs and how they can be interpreted in theatrical design. Lectures include discussions of the decorative arts in relation to political and socioeconomic developments. The goal is to give a general understanding and a greater appreciation of the historical periods and how they relate to each other. The successful student will be able to differentiate general periods and have an understanding of the western civilization's historic timeline. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5625. History of Fashion. 1 to 3 Credit Hour.**

This is a survey course, examining the global history of dress from the Ancient Middle East to present day western cultures. The course focuses on what is worn, and why it is worn, correlating socioeconomic, religious and political influences on dress and fashion. The goal is to give a general understanding and a greater appreciation of the historical periods and how they relate to each other. The successful student will be able to differentiate general periods of dress and have an understanding of the western civilization's fashion timeline. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5641. Theatrical Model Making. 1 to 3 Credit Hour.**

Model building skills are used in theatrical design, architecture, interior design and the film and television industry. This is a skills based studio course, with a concentration on skills, and individual progress as opposed to finished design and concept work. Concepts covered include construction materials and techniques; surface finishes and paint techniques; and research duplication. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**THTR 5713. Design Drafting. 1 to 3 Credit Hour.**

Drafting skills are used in many disciplines within theatrical design. As a communication tool it is essential to theatrical collaboration. This is a skills based studio course, with a concentration on industry standard drafting conventions. Students will gain knowledge in the generation, manipulation and presentation of 2D design and construction drawings. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5741. Design for TV and Film. 1 to 3 Credit Hour.**

This is a design based studio course with highlighted components in research and presentation. Topics covered include the camera; production nomenclature; survival tactics and the market; production visuals; and a brief history of art directors and production design. Major design projects are based in an original film script, multi camera sitcom, and non-fiction informational programming. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5804. Dramaturgy. 1 to 3 Credit Hour.**

This course engages the student in the process of providing comprehensive production dramaturgy to better enhance and support the creative process of mounting and marketing a theatrical production. The first task of the dramaturg is to read the text. This course is a seminar on how to read a play. Through weekly readings and discussion, we will develop and refine criteria for analyzing and understanding a play as well as making judgments about its merits. Readings will consist of theoretical approaches to analyzing a play and samples of scripts to which theory will be applied.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5871. Playwriting I. 1 to 3 Credit Hour.**

This course is designed for the relatively inexperienced playwright and the more experienced who want to improve their craft. It is a workshop based course with the focus on storytelling. The aim is to examine the fundamentals of the writers' craft: theatricality, structure, character, plot, dialogue. We are looking to develop the playwright's "voice."

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5872. Playwriting II. 1 to 3 Credit Hour.**

This course involves the creation of a jointly written work. Team writing techniques are used, and the classes become writing meetings to create weekly "episodes." Writers will rotate being Lead writers, supplying the story lines used at their particular writing session. The over-all story will be developed with character back-stories and settings established in the first two weeks.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5873. Adaptation. 1 to 3 Credit Hour.**

The course is designed to provide experience and techniques to adapt story material from other media. The work is divided into two parts: exercises in theatricality and the potential of language; and work on adapting the individual writer's choice of material. Outside reading will include other writers' material and assigned projects. The course will run as a workshop with in-class readings and discussion. Some Sunday evenings may be required.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5874. Docudrama. 1 to 3 Credit Hour.**

This course is designed to develop playwrights' skills and interest in writing plays based on news events and other factual information. Docudramas, plays based on actual happenings and presented with fidelity to those facts, are in demand for theater, films and television. The ability to research, formulate and complete such works is a significant advantage for writers who want to pursue professional careers.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5875. Poetry As Performance. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5892. Script and Score Analysis. 1 to 4 Credit Hour.**

This course is designed to equip students with a set of tools from which they may draw in the analysis of a musical theater text. Through weekly readings and discussion students will develop and refine criteria for analyzing and understanding musicals as well as making judgments about their merits.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 5893. Lyric Seminar I. 1 to 4 Credit Hour.**

This course offers a writing workshop environment for the study of creating lyrics for a musical theater piece. Instruction focuses on three equally important and interrelated aspects of songwriting: form, theme, and content. Each week, students perform practical exercises and write lyrics to strengthen their songwriting skills. Exercises are designed to broaden rhyming patterns, add specificity and color to songs, and strengthen narrative. Students also study lyrics from established songwriters such as Cole Porter, Ira Gershwin, Oscar Hammerstein and Stephen Sondheim. The course culminates in the presentation of a 12 minute piece written by the student.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 5894. Lyric Seminar II. 1 to 4 Credit Hour.**

This course builds on the foundational practices and principles learned and developed in Lyric Seminar I. Musical Theater is an integral and ever-changing part of the American culture. Its ambiguous relationship--or lack thereof--with the "popular music" of the day has caused a detachment between writers and audiences. This course encourages the aspiring writers to seek new directions in the writing of musical theater. The students will examine classic and contemporary examples of musical theater pieces, as well as works from other genres, and proceed to write their own scenes and lyrics. They will also become familiar with various musical styles and learn to communicate with future collaborators.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in THTR 5893.

**THTR 8001. Seminar in Dramatic Literature. 2 to 3 Credit Hours.**

A comprehensive study of the literature, criticism, and history of Western theater from the ancient Greeks to the end of the French neo-Classic period. Note: Required of all M.F.A. candidates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8002. Seminar in Dramatic Literature. 2 to 3 Credit Hours.**

A comprehensive study of the literature, criticism, and history of Western theater from the Restoration period to the present. Note: Required of all M.F.A. candidates.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8101. Stagecraft for Teachers. 3 Credit Hours.**

Stagecraft is the study of technical theater and introduces students to a practical approach to technical and production aspects of live theater. This course will introduce students, both novice and experienced, to a practical approach in both technical and production aspects of theater. Students learn the skills needed to construct scenery, hang and focus lighting instruments, and implement a sound system. Students are trained in the usage of tools, lumber, and equipment. Emphasis will be on the application of this technical knowledge into the classrooms of the educators taking the class and all lessons are geared towards teaching teachers how to teach technical theater.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8102. Acting 1 for Teachers. 3 Credit Hours.**

The actor explores techniques in relaxation, improvisation, and concentration using Uta Hagen's Basic Object exercises as a foundation. These techniques will be applied to one scene and one monologue taken from contemporary American dramatic literature. This course is geared towards K-12 teachers who will take the knowledge back to their classrooms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8103. Introduction to the Director's Art for Teachers. 3 Credit Hours.**

In this class, students will undertake a comprehensive study of the director's role as a storyteller - the directing process from preparation to performance. The course will cover Script Analysis - developing a directorial approach to the material based on reading, research, as well as text and character analysis; the Tools of the Trade - the craft fundamentals of staging, working with actors in the rehearsal process; process of casting, design, tech and production; Exercises and Scenes - the study, exploration and practical application of the above through in-class exercises, presented scene work and written analysis. The class will discuss how to apply all of these basics back into the school setting of the teachers taking the course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8104. Methods of Teaching Theater for Teachers. 3 Credit Hours.**

The course will guide those pursuing the Theater Education Certificate, or MA in Theater Instruction, or the Endorsement for grades K-12, to the theory and practice of teaching artistry. In addition to gaining practical method and techniques, students will also gain an understanding of the teacher-student dynamic in the classroom and the culture of educational settings. This course will prepare students to work as effective and thoughtful teachers in partnership with classroom teachers. An exploration of the theory and practice of teaching artistry, students will examine how to engage young people, in partnership with a classroom teacher, in and through theater. A hands-on course (though online), students will acquire practical methods, strategies, and a repertoire of exercises, through which theater can be used as a teaching and learning tool in both the K-6 and 7-12 classroom settings. Throughout the course, students will apply and dissect the methods learned, in their Temple online classroom and in their own or others' observed classrooms. Students will learn from each other through observation and discussion of the Teaching Artist methods implemented in class. The course will explore what the Association of Teaching Artists and others have identified as essential skills and capacities.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8105. Stage Management for Teachers. 3 Credit Hours.**

In most levels of theater there are few opportunities to learn the all important skills of the Stage Manager. Most new stage managers move through their performances and duties using improvisation, trying to carry out their duties by trial and error. This course will provide a sheltered environment for students to acquire the knowledge and skills necessary to become a competent stage manager. Most importantly this course will teach teachers how to teach stage management to their students. Organization, delegation, scheduling, and personnel management are some of many of the skills discussed. After completion one should be able to successfully stage management a theater production and pass along this knowledge to their own classrooms. Additionally, this course will demonstrate to students how to teach these fundamental concepts to future teachers in the Theater Education 4+1 program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8106. World of the Play for Teachers. 3 Credit Hours.**

World of the Play for Teachers is intended to provide an overview of the dramaturgical research process, which includes providing research materials for a cast, the creative team, and for publicity/marketing purposes. Included will be approaches to creating engagement for artists, audiences and educational purposes. For those pursuing the Theater Education M.A., lectures and information will be geared towards how to take the objectives and outcomes of this course and apply it to your school setting. For each project, anyone in the MA Theater Education Program will be required to add that slant to your papers and projects - the angle of teaching others the lessons you have just learned.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8107. Acting II for Teachers. 3 Credit Hours.**

Through scene work and in-class exercises, students will further explore releasing impulses as well as bettering their application of circumstances, objectives, and actions to a character. Students will participate in various exercises (Talking & Listening, Objective/Obstacle, Personalization), will create a personal warm-up, will score their scripts, and will perform two different scene presentations. In addition, there will be work with advanced solo exercises, intended to further cement the truthful foundation of acting. The course will also focus on how drama and theater teachers can utilize and synthesize this information in applying it to their own classrooms, with their own students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8108. Directing for the Musical Stage for Teachers. 3 Credit Hours.**

Directing for the Musical Stage for Teachers provides instruction, mentorship, and practice in the art of directing musical theater. Students examine the myriad complexities of directing musicals: multiple-artist-collaboration, large cast management and scheduling, and musical knowledge essential for interpretation of scores and libretti. Most importantly, the course offers information, planning, and pedagogy for the M.A. Theater Education students to take back to their own classrooms...teaching theater teachers how to teach theater.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8109. Introduction to Design for Teachers. 3 Credit Hours.**

The objective of Introduction to Design is to introduce the principles of theatrical design through lecture, discussion and practical work. At the conclusion of the course, students should gain a basic understanding of scenic, lighting, sound, and costume design and the processes involved - as applied to the theater. Topics covered include Script Analysis for Design; the Elements of Design and Principles of Composition; The Design Process; along with the Techniques of Visual Communication and Presentation. Students will be able to use the skills and vernacular of theater design in the planning and implementation of their own classrooms in the school system settings. Essentially...teaching teachers how to teach theater design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8111. Welcome Backstage for Teachers. 3 Credit Hours.**

This class will acquaint teachers with the world of technical theater and provide a working understanding of theater as a collaborative art. Through lectures, class discussions, online activities, projects, written work, online content, and more you will be introduced to the concepts of scenery design and construction, costumes, props, lighting, sound and stage management - and how they all work together to create a unified theatrical production. Additionally, this course will focus on not only the skills, but how to translate those skills back to your classrooms, shops, and stages - anywhere you work with students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8211. Speech for the Actor III. 1 to 3 Credit Hour.**

Exploration and study of dialects and accents for use in stage productions. Initial emphasis for each dialect will be on the use of the International Phonetic Alphabet for dialect transcription. Then special attention is placed on gaining comfort and ease in the dialects through conversation and improvisation. The class will consist of regular presentation and performance of scripted material using each of the selected dialects. Dialects to be studied and reviewed include: Irish, French, South African, Spanish, and Italian and one North American (or otherwise new world dialect of students choosing). There is a final project where dialect accusation and interview skills will be put to the test.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8212. Speech for the Actor IV. 1 to 3 Credit Hour.**

Begin work on dialect acquisition and learn Standard British as well as a non-coastal southern US dialect. The goal is that the dialect work will culminate in performances, (in collaboration with the Graduate Acting Class), of dialect plays. Also, throughout the semester, they will continue work on standard speech by applying it to a poetry-in-performance project that will be work-shopped in class. As a capstone for this year's work, actors choose a dialect that they research, master and teach to the class; they also apply it to a monologue that will be performed in Friday Scenes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8221. Acting III. 3 Credit Hours.**

Text: Explore different playwrights, focusing on texts that challenge the actor in style, period, class, character, movement, and language. Research literature and the historical context and physical world of the period using exercises and scene work from plays by Tennessee Williams and Eugene O'Neill. Through improvisation and in small group projects, gain a deeper appreciation for the relationship with the audience and one's own body's capacity for expression.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8222. Acting IV. 1 to 3 Credit Hour.**

Text: Explore different playwrights, focusing on texts that challenge the actor in style, period, class, character, movement, and language. Research literature and the historical context and physical world of the period to find appropriate movement to reveal characters' psychological impulses. Technique: Introduce Chekhov Technique. Scene work is from plays by Anton Chekhov. Shakespeare: Continue increased emphasis on the physical dimension through explorations with Laban and focus on discovering the muscularity and musicality of the language, images, and movement impulses in the text. Continue to develop and refine a feeling for Shakespeare with an awareness of sound and rhythm in relation to meaning and emotion and how that translates into action.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8231. Vocal Production for the Actor III. 2 to 3 Credit Hours.**

Focus on structuring the voice while maintaining the relaxation and centeredness acquired in the destructuring. Structuring employs rib-reserve and abdominal support. Application of this technique to Shakespeare monologues.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8232. Vocal Production for the Actor IV. 1 to 3 Credit Hour.**

Focus on structuring the voice while maintaining the relaxation and centeredness acquired in the destructuring. Structuring employs rib-reserve and abdominal support. Application of this technique to Shakespeare scenes.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8241. Dance for the Actor III. 2 to 4 Credit Hours.**

Movement: In the fall, students apply the principles of the Alexander Technique to vocal work. Students explore the relationship between the use of their Primary control and vocal resonance, breathing, and emotional availability. Students will apply the Alexander Technique to the whispered "ah", vocal exercises, singing, and monologues. The goal of this class is to help actors become aware of the role that their overall physical use plays in their vocal expression and to give them a means whereby they can work towards vocal health and expressiveness. Dance: The first half of the class period alternates weekly between Modern and Ballet. The second half of the class addresses such social steps as the Polka, Mazurka, waltz, Tango, and Fox Trot. Stage Combat: This course focuses on familiarizing students with the essential requirements for performing safe, effective stage combat. Students train in the foundation skills of stage combat techniques: Unarmed and knife.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8242. Dance for the Actor IV. 1 to 3 Credit Hour.**

Movement: In the spring, the course centers on characterization - on doing the "incorrect thing correctly." Through out-of-class observation and analysis as well as in-class investigation and scene work, students apply what they have learned in previous years to the exploration of characters with age, disabilities, and other physical challenges. The goal of this course is to teach actors how to keep their instruments healthy and working at their best when presented with a challenging role. Dance: The first half of the class period alternates weekly between Modern and Ballet. The second half of the class is devoted to Tap: time steps, soft shoe, buck and wing, and fast foot coordination. Stage Combat: Introduction of additional weapon styles: Rapier, Dagger and Broadsword. The performer receives a well-rounded approach to each style. At the conclusion of the course, students will have the opportunity to take the "Skills Proficiency Tests" toward official SAFD recognition in stage combat skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8321. Costume Production. 1 to 3 Credit Hour.**

This course is an introduction to the process of costume construction from the designer's sketch to the finished garment. This course will cover basic skills necessary to construct a garment and create costume props and accessories. Sewing skills, fabric identification and basic pattern layout are some of the topics included. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8421. Drawing and Rendering for the Theater I. 1 to 3 Credit Hour.**

This course is a skills based studio class, with a concentration on skills and individual progress as opposed to finished design work. The course covers dry and wet media as a basis for further study of presentation and communication techniques in all disciplines of theatrical design. Included media - pencil, charcoal, pen and ink, watercolor, gouache and acrylic. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8422. Drawing and Rendering for the Theater II. 1 to 3 Credit Hour.**

This course is a skills based studio class in digital and digital/hand combinations techniques. There will be a concentration on skills and individual progress as opposed to finished design work. The digital environments of Photoshop, Illustrator and SketchUp will be explored along with how those programs can be combined with analog drawing and painting techniques. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8431. Scene Painting I. 1 to 3 Credit Hour.**

The goal of this course is to provide the student with a basic knowledge of scenic painting techniques, including styles, tools and nomenclature. These goals will be achieved through demonstration and practical "hands-on" painting projects. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8432. Scene Painting II. 1 to 3 Credit Hour.**

This course is a continuation of Scene Painting I. Techniques and concepts that were introduced will be explored in more detail. Concentration is on intermediate techniques and the execution and accurate use of paint elevations. Assignments are more individualized and the student must be self-motivated in carrying out the assignments. As in Scene Painting I, the goals will be achieved through practical "hands-on" painting projects. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8482. Projects in Technical Production. 1 to 8 Credit Hour.**

A practicum course to provide a grading source for graduate production work. Work will be evaluated in the following general areas: professional practice, artistic growth, communication, and collaboration. The faculty will also be asking for a self-evaluation of your project, in written form, due at a date to be determined by the Design and Production faculty. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8511. Lighting Design II. 1 to 3 Credit Hour.**

To provide a clear understanding and strong basis of language analysis and its application in lighting design. Various techniques in text interpretation will be used and explored. These techniques will then be used to the design process. There will also be a research project in the direct application of contemporary scientific developments. Throughout this course, the design process for the current Temple productions will continually be examined. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8521. Lighting Design III. 1 to 3 Credit Hour.**

To provide a clear understanding and strong basis of language analysis and its application in lighting design. Various techniques in text interpretation will be used and explored. These techniques will then be used to the design process. There will also be a research project in the direct application of contemporary scientific developments. Throughout this course, the design process for the current Temple productions will continually be examined. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8611. Costume Design II. 1 to 3 Credit Hour.**

The goal of Costume Design II is to develop skills leading to a profession in the field of costume design for the performing arts (theater, television, film, opera, dance, etc.) or entertainment industry. Advanced projects in script analysis, character development, primary and secondary research as well as real-world problem solving. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8621. Costume Design III. 1 to 3 Credit Hour.**

The goal of Costume Design III is to continue development of skills leading to a profession in the field of costume design for the performing arts (theater, television, film, opera, dance, etc.) or entertainment industry. Advanced projects in script analysis, character development, primary and secondary research as well as real-world problem solving. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8622. Draping and Flat Pattern Drafting I. 1 to 3 Credit Hour.**

To develop skills in drafting flat patterns using slopers, draping on a dress form, individual measurements and pattern resources. Pattern making skills will focus on historic patterns and fabrics and the development of period costumes for theatrical use. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8623. Costume Crafts. 1 to 3 Credit Hour.**

This class covers materials techniques and alternative applications used in creating costume pieces that are crafted rather than sewn. Projects will include mask making, millinery and other costume accessories used in theatrical productions. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8624. Draping and Flat Pattern Drafting 2. 1 to 3 Credit Hour.**

This course entails advance flat pattern drafting and draping techniques needed to construct period garments for theatrical productions. The focus of the projects will be on period men's garments, tailoring techniques and advance pattern drafting. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in THTR 8621.

**THTR 8641. Theatrical Makeup. 1 to 3 Credit Hour.**

The course is designed to give to students an overview of basic makeup techniques with the hands-on opportunity to learn and apply the principles of standard and character stage makeup. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8682. Projects in Costuming. 1 to 8 Credit Hour.**

A practicum course to provide a grading source for graduate production work. Work will be evaluated in the following general areas: professional practice, artistic growth, communication, and collaboration. The faculty will also be asking for a self-evaluation of your project, in written form, due at a date to be determined by the Design and Production faculty. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8711. Scene Design II. 1 to 6 Credit Hour.**

This is a skills/activity course in the theory, process, and techniques of scenic design for the theater. Topics will include principles, elements, and concepts of design; script analysis; design concept development; creative research and its interpretation; and the communication and presentation of theatrical ideas. Specific projects, lectures and discussions, followed by student presentation and response will structure the course. Projects and presentations will include: scenic plots, research, thumbnails, sketches, ground plans, elevations, color renderings and models. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8721. Scene Design III. 1 to 3 Credit Hour.**

This is a skills/activity course in the theory, process, and techniques of scenic design for the theater. Topics will include principles, elements, and concepts of design; script analysis; design concept development; creative research and its interpretation; and the communication and presentation of theatrical ideas. Specific projects, lectures and discussions, followed by student presentation and response will structure the course. Projects and presentations will include: scenic plots, research, thumbnails, sketches, ground plans, elevations, color renderings and models. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**THTR 8881. Playwriting III. 1 to 3 Credit Hour.**

Writers and Directors. This course explores the relationships between writers and directors in the creation of new work. The aim is to create the most fruitful collaborative experience so that the writer can complete work influenced by staging possibilities, and the director can understand more fully the nuances of original texts. Mounting scenes and creating practical circumstances for writers and directors will be the primary methods for exploring this essential relationship.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8882. Playwriting IV. 1 to 3 Credit Hour.**

This course examines and develops techniques for creating solo performance works, works intended to be done by the writer or by actors. The work of such early solo artists as Spalding Gray, Eric Bogosian, Anna Deveare Smith, Laurie Anderson and Karen Finley will be discussed as well as contemporary artists. Course will culminate in a solo performance night.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8883. Teaching Playwriting. 3 Credit Hours.**

In the third year of the program, the playwright will teach classes or all of a playwriting course, preparing syllabi and daily lesson plans. The mentor will visit classes and examine the work produced.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 8983. Vocal Arranging. 1 to 4 Credit Hour.**

Vocal Arranging is designed for students who want to write vocal charts for the musical theater stage and music industry professionals that are easy to understand, cleanly written, plot driven, and musically satisfying. Through guided study using demonstrations, audio clips, and writing exercises, the course explores how to write for a variety of vocal ranges and timbres and how to create interest by utilizing numerous arranging tools. The course starts by introducing the basic concepts of vocal writing—how singers use their voices and what they need from writers, in addition to proper notation and setting of text to music. Analysis of "successful" vocal arrangements from a variety of arrangers past and present will be emphasized as well as writing projects. The course then explores how to create rich textures through 2-, 3-, and 4-part background harmonies, increasing in complexity. You will also study a capella writing, stressing the importance of constantly changing texture to maintain interest. Each week, you will have the opportunity to rehearse and record your own arrangements, thereby hearing what you've created.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8984. Music Direction for the Musical Theater Stage. 1 to 4 Credit Hour.**

Study of the practical skills needed to prepare the student musical director to work in a professional musical theater environment. Songs and scenes from standard musical repertoire will be analyzed. Special attention will be given to unique challenges of the musical theater: stylistic interpretation, vocal technique and ornamentation as it applies to the stage, the creative realizing of vocal and orchestral arrangements, playing rehearsals, coaching singers, working with directors and choreographers, and aspects of sound design and amplification. Participants will use the latest technology to receive hands on training in the management and implementation of the musical theater audition, rehearsal, and production processes. Lectures will also be given by industry experts on pertinent subjects relating to real-world success in the field of music direction.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 8985. Teach in Higher Education. 3 Credit Hours.**

This is a course in pedagogy that is designed to expose graduate students to "best teaching practices" in Higher Education. Successful completion of the course results in a certificate from Temple University verifying that the student has successfully prepared to teach on the college level.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 9001. Lyrics/Book Seminar I. 1 to 4 Credit Hour.**

This course focuses on developing the framework of a musical theater piece. The workshop discussion includes the basic book and lyric writing techniques: plot structure, story development and adaptation, as well as song forms (pop, musical theater, etc.) and how to musicalize scenes. Writers will also be encouraged to explore the collaborative process and develop ideas for original musicals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9002. Lyrics/Book Seminar II. 1 to 4 Credit Hour.**

This course continues the work of Lyrics/Book Seminar I, focusing on developing the framework of a musical theater piece. The class expands on foundational studies in book and lyric writing techniques: plot structure, story development and adaptation, as well as song forms (pop, musical theater, etc.) and how to musicalize scenes. Writers continue to explore the collaborative process and develop ideas for original musicals.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9085. Theater Internship. 1 to 6 Credit Hour.**

This course offers hands-on, organized, professional work under supervision in a professional theater or a leader in the entertainment industry. Permission of the instructor is necessary and course registration must occur prior to actual internship work. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 9087. Graduate Ensemble Practicum. 1 Credit Hour.**

This course provides a forum for creating ensemble across the Theater MFA cohort. Its purpose is to generate relationships and networking opportunities as well as dissolving barriers between disciplines. Course work will include in-class projects, round table discussion, production presentations and professional guests on subjects appropriate to the success of a working artist. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9211. Speech for the Actor V. 1 to 3 Credit Hour.**

In the third year, speech class is devoted to tutorials. Students meet with the professor and decide on a course of study that fits their area of specialization and emphasis. Each student meets on a weekly basis for at least one half-hour. During these sessions, any persistent speech problems the student has may be addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9212. Speech for the Actor VI. 1 to 3 Credit Hour.**

Ongoing tutorials in student and teacher-driven projects. As a capstone for this year, actors will focus on a topic in speech as it applies to their final main stage performance. A final written evaluation and score of the text will serve as documentation of their work.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9221. Acting V. 1 to 3 Credit Hour.**

Acting V focuses on acting work in front of the camera - both as a way of learning how to successfully transition acting skills to mediated dramatic material and as a way of examining the work as seen through the lens of the camera.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9222. Acting VI. 1 to 3 Credit Hour.**

Acting VI is the culmination of the graduate acting sequence and will focus on projects such as serialized dramatic material, or generative projects in partner with the graduate directing program. The work will be highly collaborative and will culminate in a final project.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9231. Vocal Production for the Actor V. 2 to 3 Credit Hours.**

Research a major voice technique through careful study of one text. Prepare a presentation of the main thesis as well as a sequence of exercises that most clearly exemplifies the method and is most useful for the vocal development of the actor. Continue work on individual vocal development through private tutorials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9232. Vocal Production for the Actor VI. 1 to 3 Credit Hour.**

Discussion of methods and presentation of workshops by those who have elected a vocal emphasis. Continue work on individual vocal development through private tutorials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9241. Dance for the Actor V. 1 to 3 Credit Hour.**

**Movement:** The fall semester concentrates on a broader view of kinesthetically-based methods of working with oneself, with the primary focus being the relationship between the Alexander Technique and the Feldenkrais Method. Through Awareness, Movement and Functional Integration students will delve into their personal movement patterns from a different perspective. The goal of this course is to provide a perspective on how to use their Alexander training when presented with other movement modalities. **Dance:** Projects involving movement and dance will be conceived and coached. Also, individual attention to those students for whom this area is their craft emphasis. **Stage Combat:** Students continue in new weapon styles: Single sword, Small Sword and Quarterstaff. Again, at the conclusion of the class, students will have the opportunity to take the "Skills Proficiency Tests" toward official SAFD recognition in advanced stage combat skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9242. Dance for the Actor VI. 1 to 3 Credit Hour.**

**Movement:** In the spring, the course will be treated as a studio class with students receiving multiple private lessons and presenting scenes and monologues in class. The goal of this class is focus in depth on each student's individual vocal and physical needs and to give them opportunities to perform using the skills they are working on in front of an audience that can give informed feedback. **Dance:** Projects involving movement and dance will be conceived and coached. Also, individual attention to those students for whom this area is their craft emphasis. **Stage Combat:** Students will have the opportunity to continue their training by assisting in teaching an undergraduate combat class or by pursuing a special topic as their craft emphasis. The craft emphasis will culminate in a performance or workshop, incorporating stage combat skills.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9251. Acting for the Camera. 1 to 3 Credit Hour.**

The study of acting techniques as applied to film, soap operas, prime-time dramas, prime-time situation comedies, commercials and industrials.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9282. Project in Acting. 1 to 4 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9283. Projects in Acting. 1 to 8 Credit Hour.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9382. Projects in Directing I. 1 to 4 Credit Hour.**

The course is offered each year on a tutorial basis and may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9383. Projects in Directing II. 1 to 4 Credit Hour.**

The course is offered each year on a tutorial basis and may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9387. Directing Practicum III. 1 to 3 Credit Hour.**

The theory and practice of directing, focusing on specific genre scenes. Students will study the scene as a means of exploring the work of challenging playwrights.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9388. Directing Practicum IV. 1 to 4 Credit Hour.**

The theory and practice of directing, focusing on specific genre scenes. Students will study the scene as a vehicle for developing stylistic or methodological approaches to directing.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9411. Seminar in Technical Production I. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9421. Seminar in Technical Production II. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9483. Projects in Technical Production. 1 to 8 Credit Hour.**

A practicum course to provide a grading source for graduate production work. Work will be evaluated in the following general areas: professional practice, artistic growth, communication, and collaboration. The faculty will also be asking for a self-evaluation of your project, in written form, due at a date to be determined by the Design and Production faculty. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9487. Musical Theater Practicum III. 1 to 4 Credit Hour.**

This course is a continuation of Musical Theater Practicum II, an intensive, team-taught practicum that guides directors, composers, lyricists, and book writers to merge their unique artistic visions to create musical theater pieces. Songwriting craft, issues of communication between artists of different disciplines, and storytelling through music and text are emphasized. From character creation and script analysis to collaborating with writers, directors and music directors, students will have the full experience of working on new musical pieces, and will be encouraged to find their own voices and learn to merge their unique artistic visions with those of other collaborative artists to create exciting new work. Class participants work in rotating teams to write and present songs and scenes, exploring song form, dramatic structure, and the process of conceiving longer works.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 9511. Seminar in Lighting I. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9521. Seminar in Lighting II. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9582. Projects in Lighting. 1 to 8 Credit Hour.**

A practicum course to provide a grading source for graduate production work. Work will be evaluated in the following general areas: professional practice, artistic growth, communication, and collaboration. The faculty will also be asking for a self-evaluation of your project, in written form, due at a date to be determined by the Design and Production faculty. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9587. Musical Theater Practicum IV. 1 to 4 Credit Hour.**

This course is a continuation of Musical Theater Practicum III, an intensive, team-taught practicum that guides directors, composers, lyricists, and book writers to merge their unique artistic visions to create musical theater pieces. Songwriting craft, issues of communication between artists of different disciplines, and storytelling through music and text are emphasized. From character creation and script analysis to collaborating with writers, directors and music directors, students will have the full experience of working on new musical pieces, and will be encouraged to find their own voices and learn to merge their unique artistic visions with those of other collaborative artists to create exciting new work. Class participants work in rotating teams to write and present songs and scenes, exploring song form, dramatic structure, and the process of conceiving longer works.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THTR 9611. Seminar in Costumes. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9621. Seminar in Costumes II. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9682. Projects in Costuming. 1 to 8 Credit Hour.**

A practicum course to provide a grading source for graduate production work. Work will be evaluated in the following general areas: professional practice, artistic growth, communication, and collaboration. The faculty will also be asking for a self-evaluation of your project, in written form, due at a date to be determined by the Design and Production faculty. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9711. Seminar in Scenery. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9721. Seminar in Scenery II. 1 to 6 Credit Hour.**

A variable topic production course covering subjects not found in other courses. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9782. Projects in Scene Design. 1 to 8 Credit Hour.**

A practicum course to provide a grading source for graduate production work. Work will be evaluated in the following general areas: professional practice, artistic growth, communication, and collaboration. The faculty will also be asking for a self-evaluation of your project, in written form, due at a date to be determined by the Design and Production faculty. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9882. Projects in Playwriting. 1 to 6 Credit Hour.**

Working with a mentor on an ongoing project. The course is offered each year on a tutorial basis and may be repeated for credit.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9982. Projects in Playwriting. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9991. Research. 1 to 4 Credit Hour.**

A research project and written documentation may be required of all MFA Design candidates at some point during their three year program. Subject and format to be determined by the candidate and their mentor. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THTR 9995. Thesis. 1 to 8 Credit Hour.**

A thesis project and written documentation is required of all MFA Design candidates. The candidate will create a thesis committee to preside over their defense and approval of the written document. *All Theater/Design candidates actively participate in design and production work in the Theater Department's main stage season. This design and production work is an extension of what is presented in the classroom and an experiential component to the degree program.*

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Therapeutic Recreation (THRC)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**THRC 5009. Entrepreneurship in the Health Professions. 3 Credit Hours.**

This course is designed to introduce students to entrepreneurship. The goal of the course is to demonstrate the links between knowledge, experience and skills and commercial possibilities. The course integrates a number of different disciplines, ranging from sociology and psychology to economics, finance, marketing and human resource management. Through assigned readings, class discussions, activities and guest lectures from various professional fields, students will be challenged to apply theoretical principles, concepts and frameworks to real world situations.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5101. Health, Activity and Aging. 3 Credit Hours.**

This course provides an interdisciplinary lifespan-oriented overview of the aging process, with an emphasis on its interrelationships with health and activity. Particular emphasis is given to the roles of leisure, health, activity, and environment in promoting health and well-being, as well as accommodations that may be necessary to maintain the health and well-being of older adults. Given the diversity of aging populations, topics such as gender, ethnicity, and lifelong disabilities are also addressed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5102. Orientation TR. 2 to 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5204. Recreation Therapy and Assistive Technology. 3 Credit Hours.**

This course introduces students to the role of assistive technology (AT) in promoting the full inclusion and community participation of persons with disabilities. Emphasis is placed on the AT devices and services that promote functional independence and participation in the community and in physically and socially active recreation and leisure.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5205. RT Geriatric Services. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5211. Rec Th & Phys Rehab. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5212. Play and Development. 3 Credit Hours.**

This blended course (i.e., online and classroom) explores the theoretical and practical dimensions of play and the dynamic relationship between child's play and development. The course examines the intersection of gender, race/ethnicity, culture, community, media, and technology with play and development. Topics include play of typically and atypically developing children, assessing play behaviors, designing multipurpose play environments, and current efforts to reinvigorate the culture of play in children development. NOTE: Undergraduates may register for this course with permission of the instructor. Also, previous coursework in developmental psychology, child/adolescent psychology, or lifespan/human development is suggested.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5213. Therapeutic Play, Recreation and Children's Health. 3 Credit Hours.**

This course examines the range of organized and structured play and recreation services used by recreation therapists to promote health, well-being, and social inclusion of children. The course examines developmental and psychosocial needs resulting from trauma, abuse, chronic illnesses, and other disabling conditions, and the use of play and recreation modalities to promote resiliency, recovery and hope within myriad service settings including hospitals, residential treatment centers, schools, camps, and municipal recreation departments. NOTE: Undergraduates may register for this course with permission of the instructor. Also, previous coursework in developmental psychology, child/adolescent psychology or lifespan/human development is suggested.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5214. Child Life Interventions. 3 Credit Hours.**

This course examines Foundation of Child Life practice, including theories and methods used to reduce stress and increase child/family abilities to cope with illness and hospitalization. The course includes rationale and evidence for interventions related to techniques to prepare children for medical procedures, pain management, coping skills, family-centered care, and bereavement support. Students learn about credentialing requirements for Child Life Specialists, and are required to engage in field-based experiential learning. NOTE: Undergraduates may register for this course with permission of the instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5243. Managing Dementia Care. 3 Credit Hours.**

Utilizing a person-centered and interdisciplinary approach, the course explores the strategies for assisting practitioners, agencies, families and caregivers with balancing the needs and behaviors of the individual with dementia, and the social and physical environments in which the person with dementia is placed. Students will apply fundamental principles for the design and evaluation of activity-based, psychosocial programs for this population. Models for managing problem behaviors while respecting the needs of the client will be explored. This course seeks to emphasize the importance of interdisciplinary support and is therefore appropriate for students of healthcare disciplines that utilize an activity-based approach. NOTE: Prior courses in lifespan/human development and anatomy are suggested. Undergraduates may enroll with permission of instructor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5250. Special Topics in TR Practicum. 1 to 3 Credit Hour.**

Contemporary issues related to new methods and areas of TR practice, including assistive technology, TR in school settings, home health care, and community leisure programs for individuals with disabilities are covered.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.



**THRC 5261. Therapeutic Recreation and Disabilities Seminar I. 3 Credit Hours.**

This seminar combines literature research on issues associated with mental health, developmental disabilities, or aging, with individual/small group conferences to integrate findings with related course content. Students complete an issues paper that synthesizes research literature and any other structured learning activities, and draws implications for Therapeutic Recreation practice. Findings are also presented to undergraduates as part of a concurrent undergraduate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5271. Therapeutic Recreation and Disabilities Seminar II. 3 Credit Hours.**

This seminar combines literature research on issues associated with physical rehabilitation, pediatrics, or long-term care, with individual/small group conferences to integrate findings with related course content. Students complete an issues paper that synthesizes research literature and any other structured learning activities, and draws implications for Therapeutic Recreation practice. Findings are also presented to undergraduates as part of a concurrent undergraduate course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5301. Evidence Based Practice in Recreation Therapy I. 1 Credit Hour.**

This course will introduce students to evidence based practice in recreation therapy. Students will develop a critical understanding of how evidence is generated, retrieved, and appraised. They will become knowledgeable about the relevance of research findings for clinical decision-making in recreation therapy (RT) practice. Students will develop skills at synthesizing and presenting evidence to support or challenge current RT issues/practices for particular diagnostic groups or interventions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5302. Evidence Based Practice in Recreation Therapy II. 2 to 3 Credit Hours.**

This course will introduce students to the practitioner-researcher role by building upon prior knowledge attained in THRC 5301 Evidence Based Practice in Recreation Therapy I. This course supports the use of research knowledge in making practice decisions that improve the delivery of recreational therapy interventions. It serves as a springboard for the student's Master's project.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Recreation Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5311. Conceptual and Contemporary Issues in Therapeutic Recreation. 3 Credit Hours.**

This course examines conceptual, theoretical, and practical issues associated with the organization and delivery of TR services. It uses a combination of lectures, readings, and oral and written exercises through which students reflect on and develop informed positions on core values and beliefs that support the profession. Students develop a plan of action for ongoing professional development during the academic program and beyond.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5312. Leisure, Health, and Life Quality. 3 Credit Hours.**

The purpose of this course is to explore the dominant concepts and theories related to recreation and leisure behaviors and experiences, and their linkages to health, wellness, and life quality. Current research describing the interrelationships between leisure and health/life quality are examined, including the topics of disability and diversity issues such as culture, gender, race/ethnicity, class, age/lifespan, and sexual orientation. The interlinking triads among theory/conceptualizations, research, and practice are emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5382. Independent Study. 1 to 6 Credit Hour.**

This supervised project is structured between the student and a faculty mentor. Projects may include developing a research proposal, conducting a field-based investigation, or developing and evaluating a program. Registering for this course requires prior permission from a faculty mentor. A mutually agreeable study contract must be secured before the end of the second week of the semester.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THRC 5402. Recreation Therapy Administration and Management. 3 Credit Hours.**

This course examines program, personnel, fiscal, and facilities management, including professional standards of practice and accreditation standards that guide and regulate organization and delivery of Therapeutic Recreation services in health care and human services settings. The course may involve applied learning experiences in area agencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5442. Clinical Programming and Practice in Therapeutic Recreation. 3 Credit Hours.**

The course examines the dynamics of recreational and other activity-based interventions used for health promotion and psychosocial adaptation. It focuses on group program design and implementation, client motivation, and leadership skills. The course includes field-based application.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Recreation Therapy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 5787. Therapeutic Recreation Practicum. 3 to 9 Credit Hours.**

Field placement is made with emphasis on acquisition and application of practical skills. For non-certified students, this 4 to 6 credit practicum is designed to meet eligibility requirements for the NCTRC credentialing examination. For currently certified students, the 3-credit practicum is designed as an advanced clinical or administrative placement.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Science.

**College Restrictions:** Must be enrolled in one of the following Colleges: College of Public Health.

**Repeatability:** This course may be repeated for additional credit.

**THRC 8133. Family Centered Care. 3 Credit Hours.**

Recent legislative, professional, demographic, and social changes have expanded traditional approaches of delivery of health services to incorporate the family in treatment and/or follow up. Students have an opportunity in this course to examine family systems theories and family-centered services for individuals with disabilities across the life cycle. They will also explore models of family-centered teams, the issues of client/family empowerment, and the accessing of services, as well as learning how to incorporate this information into the development of a family service plan. Many sessions will have an experiential component to increase awareness of family issues effecting treatment and/or practical application of technique.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 8161. Methods in Community-Based Participatory Research (CBPR) for Health. 3 Credit Hours.**

This course aims to critically examine how researchers, practitioners, and community partners can work together to establish and consolidate equitable, transdisciplinary, and sustainable partnerships by using a CBPR approach to improve the health and life quality of community populations in general and to eliminate health disparities in particular. What distinguishes CBPR from other approaches to research is the active engagement and integration of all investigators and partners into the research process through such principles as mutual respect and teamwork (rather than a top-down/university-down approach); co-learning and mutual capacity building; and power-sharing and co-ownership of research. This course provides an overview of conceptual, methodological, and practical approaches to CBPR by focusing on cross-disciplinary health issues such as holistic health, culture and health, health disparities, mixed methods in health research, evidence-based and people-centered community healthcare, and inclusive health policy.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THRC 8280. Behavioral Change Seminar. 3 Credit Hours.**

This course provides structure through which students design and implement a theory-based individual or group behavior change program through local agencies. Drawing from evidence-based "best practices" and national mandates to improve the health and wellness of individuals with chronic illnesses and disabilities, programs are designed to promote health and reduce secondary conditions. Seminar meetings are also used to provide peer supervision and feedback.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THRC 9282. Readings and Conference for Therapeutic Recreation. 1 to 3 Credit Hour.**

In-depth investigation of current literature related to a specialized area of research or practice is undertaken. Examples include health promotion programs to prevent secondary health problems, dementia care, programming for at-risk youth, and ethics. The course may also be used as preparation for THRC 8141 or background preparation for the comprehensive examination.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Therapeutic Recreation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THRC 9995. Master's Project in Therapeutic Recreation. 1 to 3 Credit Hour.**

Enrollment in this course is limited to those completing the master's degree requirements through a field-based programming project under the supervision of a faculty member. Projects include but are not limited to designing, implementing, or evaluating therapeutic recreation programs; designing projects related to systems change; or engaging in constituent awareness and education.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Therapeutic Recreation.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B in THRC 8102.

## Tourism and Hospitality Management (THM)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**THM 5311. Service Management for the Tourism and Hospitality Industry. 3 Credit Hours.**

This course provides an introduction to the underlying principles of service management in the tourism and hospitality industry. It is focused on the strategies, systems, processes and design aspects of creating and evaluating service delivery, service excellence and service orientation. Topics include understanding the "service-dominant logic" approach to marketing and managing service, setting service strategy, understanding customer needs, building a service-minded workforce, measuring and evaluating service quality, and drivers of service industry customer loyalty.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5312. Legal Issues for Hospitality and Event Enterprises. 3 Credit Hours.**

This course provides a comprehensive overview of laws and regulations governing the tourism and hospitality industry. Legal implications of civil laws, areas of tort, and contract law will be discussed, along with the law and legal relationships that exist in the business context. Hospitality law, especially when dealing with customers and business contracts, will be the main focus. Issues will be discussed from the points of view of innkeepers, restaurateurs, travel agents, lawyers, and event planners. Attention will be given to labor relations laws, Equal Employment Opportunity laws, including Title VII of the Civil Rights Act and the Americans with Disabilities Act, risk management, zoning, and unions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5313. Financial Mgt Tour/Hosp. 3 Credit Hours.**

The course will analyze managerial accounting and financial management as they are practiced in the tourism and hospitality industry, along with management strategies for financing ventures and expansion. Topics will include hospitality accounting systems and internal control, financial statement analysis and interpretation, operational analysis, cost behavior, budgeting and forecasting, pricing and feasibility analysis. Computer applications will be highlighted.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5314. e-Business for Tourism and Hospitality. 3 Credit Hours.**

This course will examine how and why electronic business and the Internet have impacted the tourism, hospitality, and entertainment industries. It will discuss the various business models that are used, and highlight the successes and failures of those models. Topics will include marketing, finance, strategy, and globalization with special emphasis on information technology and the dissemination of information.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5315. Strategic Tourism and Hospitality Marketing. 1.5 Credit Hour.**

This course provides a strategic overview of marketing in the contemporary tourism and hospitality industry. Important topics include marketing concepts, service characteristics, marketing environment and intelligence, marketing research, marketing mix, segmentation, targeting and positioning. Special emphasis will be placed on the analysis of the marketing environment and the diversity of marketing practices used by tourism/hospitality marketers in today's global market place. The course is designed as the foundation course for the Tourism and Hospitality Marketing concentration in the MSHM program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5316. Strategic Management in the Tourism and Hospitality Industry. 3 Credit Hours.**

This course covers the concepts of strategic management in the tourism and hospitality business environment and the role of strategic leadership practices. Strategic management principles will be examined to create competitive advantages for tourism and hospitality industry leaders and organizations. Specifically, the course examines the total enterprise, the industry, and the competitive environment in which it operates. The goal is to develop a mastery of the analytical tools to perform analyses of the environment, industry, competitors, and organizational resources. Management implications that are related to strategy development, implementation, and control are examined with a focus on the effective allocation of organizational resources.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5317. Tourism and Hospitality Management Consulting Project. 3 Credit Hours.**

The THM Consulting Project is designed as a capstone experience to enable MTHM students in their final semester, to work in consulting teams, analyzing real tourism and hospitality business problems, recommending appropriate actions for client organizations in the greater Philadelphia region. In teams of three to five, students will emphasize their critical and creative thinking that they have developed as a result of participating in the MTHM program to enable effective problem identification with a solution orientation. Teams will develop a written report that provides an analysis of the current situation, recommended solutions, as well as a detailed implementation plan. A formal presentation of the report to the client organization is also required. A strong emphasis will be placed upon developing consulting skills which will augment the discipline specific content reflected in other courses.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of C- in THM 5485.

**THM 5318. Sustainable Tourism Management. 3 Credit Hours.**

This course provides an overview of the foundations of the destination design process. Emphasis will be on the basic theory of travel behavior as well as the systems that support the development of destinations. Consideration will be given to the ecological impacts of tourism, examining the processes that enable sustainable destination planning. Special readings from the current literature, case studies, guest speakers, and video cases will form an integral part of this course.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**THM 5320. Special Topics in Tourism and Hospitality Management. 1.5 Credit Hour.**

This seminar is designed to provide an in-depth exploration of special topics, current issues, and trends in the tourism and hospitality industry. Relevant industry problems and issues facing management and personnel in the related industries will be discussed.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**THM 5321. Tourism Analytics. 3 Credit Hours.**

This course aims to provide tourism industry professionals with the necessary tools to guide/aid decision making. The course is designed to familiarize students with quantitative data management and analytic skills such as econometric modeling, forecasting, interpretation of results, and development of conclusions, using tourism and hospitality information databases, as well as analytical software. Specific emphasis is given to econometric modeling of tourism assets that have cross and/or spatial dependence, in conjunction with applicable urban economics and finance theories. The course has two main goals: development of skill in the use of advanced data analysis techniques and the development of expertise in the interpretation and communication of their results.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in STAT 5001.

**THM 5322. Strategic Brand Management. 1.5 Credit Hour.**

Successful brand management is a requirement for tourism and hospitality organizations operating in highly competitive markets. In providing students the insight to leverage a competitive advantage through brand management, this course will introduce the nature of brands, the importance of the brand establishing a promise, and the tools required to develop a coherent brand strategy. Consideration will be given to the elements of a successful service brand with a focus on establishing a compelling differentiated tourism and hospitality proposition. A strategic brand management framework will set the foundation for the course, enabling students the opportunity to consider, in detail, the elements required to manage a tourism or hospitality brand effectively.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5323. Sustainable Tourism Development. 3 Credit Hours.**

This course will examine the three major areas that make up sustainability: economic, socio-cultural, and environmental sustainability. Students will learn how the international tourism industry effects each of these areas and the inter-connectedness of these impacts. Students will investigate the main principles for sustainable tourism development at the local, regional, national, and international levels.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SF

**Repeatability:** This course may not be repeated for additional credits.

**THM 5324. International Tourism. 3 Credit Hours.**

The importance and the development of an international tourism market will be discussed, along with the planning and development of an international tourism destination. Cultural tourism and ecotourism will be included.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5325. Gaming and Casino Management. 1.5 Credit Hour.**

The objectives of this course are to develop an understanding of the gaming industry. An examination of the evolution of the industry will set the foundation for examining management considerations for casino operations within a casino hotel. Current issues in the casino and gaming industry will be discussed with a detailed examination of trends, policies, and subsequent operational impacts.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5326. Consumer Behavior in Tourism and Hospitality. 3 Credit Hours.**

This course provides an overview of current knowledge about consumer behavior in the tourism/travel and hospitality businesses. Basic behavioral science and specific research (both qualitative and quantitative) tools used in marketing practice are covered. Issues of consumer decision-making, behavioral determinants, cultural influences, motivation, information search, and marketing implications are addressed. The course format includes lecture/discussion, student presentations, and a required term paper. The course is designed for graduate students who want to pursue managerial positions in consumer behavior/marketing research in the tourism or hospitality industry. [Basic college-level statistical knowledge is required.]

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5327. Customer Relationship Management in Tourism and Hospitality. 1.5 Credit Hour.**

This course focuses on the broad spectrum of Customer Relationship Management (CRM) and concentrates on concepts and practices related to building and maintaining customer loyalty and firm profitability in the tourism/hospitality businesses. It emphasizes customer profitability analysis and the profitable management of customer relationships. It covers innovative approaches to calculating the value of customers, managing customer portfolios, and making strategic decisions necessary to increase customer equity using value propositions. Some data mining/ management examples will be used to illustrate the relevant CRM techniques.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5328. Tourism Economics and Policy. 3 Credit Hours.**

This course focuses on the role that economics and policy play within the tourism industry. Specific economic and policy theories that are essential for the tourism industry will be investigated. Topics include theory of tourism demand and supply, using cost-benefit analysis, tax policy impacts, tourism valuation, economic analysis in management, and marketing and policy decision.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5329. New Media and Distribution. 1.5 Credit Hour.**

This course will examine the fluid and rapidly changing nature of the distribution networks of the tourism and hospitality industry and the resultant effects on branding, loyalty, and value. Specifically, this highly interactive class will explore the complex relationships that currently exist in the tourism and hospitality industry, both in terms of financial and operating structure, and those with vendors who sell their products. A particular focus will be on current and emerging intermediaries, who will increasingly yield substantial influence as the gatekeepers directing consumer traffic, and ways to measure their relative effectiveness.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5330. Special Topics in Tourism, Hospitality, and Event Management. 3 Credit Hours.**

Varying special topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**THM 5331. Hospitality Operations Management. 1.5 Credit Hour.**

This course concerns itself with how work is done in hospitality operations. Hospitality operations tend to be complex due to their unique characteristics and highly uncertain environments. Students will develop an understanding of operations management theories and expand their ability to apply suitable theories under different situations. Application of techniques to create, operate, staff and evaluate service systems is emphasized. Consideration is given to queuing, forecasting demand, route and scheduling as well as quality management and liability minimization. The course is designed as the foundation course for the Operations Management concentration in the MTHM program.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5332. Management Information Systems in Tourism and Hospitality. 3 Credit Hours.**

This class will examine the implication of information technology on the tourism and hospitality business and how to manage information technology resources within a company to maximize operation efficiency and productivity. Students will learn to be information technology professionals in the industry who can manage, develop, and lead organizational information systems based on the integration of core business concepts and ever-changing knowledge about information and technology.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5333. Seminar for Information Technology in Tourism and Hospitality. 3 Credit Hours.**

The final course in the information technology track is a case studies course. We will be examining technology and dot-com case studies in the tourism, hospitality, and entertainment industries. The case study methodology will be covered so that students can conduct and write case studies. For a final project, each student will be writing a case study. It is intended that those case studies may be expanded into a Master's Thesis or Project that is required of students for degree completion.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5334. The Business of Event Management. 1.5 Credit Hour.**

The events and meeting industry has long been recognized as a major market sector in the tourism and hospitality industry, and is one of the fastest growing in the industry. This course will provide students insight into its complex and diverse nature as represented in the diversity of the industry, including goal and mission establishment, strategic planning, event program planning and design, program evaluation and many other industry specific topics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5335. Effective Sales Management. 1.5 Credit Hour.**

Personal selling is a significant contributor to tourism and hospitality revenues. In providing students with an overview of the sales management process and its significance to the industry, this course will emphasize experiential based learning. Students will have an opportunity to develop and practice their personal selling skills by participating in field based sales initiatives with industry partners.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5336. Revenue Management and Hotel Analytics. 3 Credit Hours.**

Perishable inventory with variable demand necessitates effective revenue management to realize the tourism and hospitality mechanism of revenue optimization. Participation in this course will afford students the opportunity to identify and exploit the core elements of revenue management, namely forecasting, controls (pricing and allocation/optimization decisions) and monitoring. This course aims for students to establish a reasonable level of relevant analytical/technical proficiency in each one of these core revenue management elements. Within the broader area of pricing theory, additional emphasis is placed on overbooking, consumer behavior, distribution channel management, and market segmentation. Utilizing STR hospitality metrics, students will develop hotel analytical skills and the opportunity to receive the STR certification in Hotel Industry Analytics.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5341. Destination Events - A Global Perspective. 3 Credit Hours.**

This course provides an in-depth and comprehensive analysis for the worldwide festivals and event industry, the impact of current international issues, an understanding of how events and festivals are staged globally, as well as the legal and risk related concerns that come with events and festivals. Characteristics specific to the global aspect of the industry will be examined as well as the essentials of developing an effective inbound tourist experience.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5342. Destination Management and Marketing. 3 Credit Hours.**

This course is designed to provide a comprehensive understanding of the role, the scope and the business of destination marketing organizations (DMOs) as well as convention and visitor bureaus (CVBs). The trends, issues and challenges facing DMOs and CVBs will be discussed. In addition, an analysis of the planning process in developing tourism destinations in global, community, metropolitan, urban and rural settings will be investigated. Emphasis will be on stakeholder engagement, product development as well as enhancement of facilities to meet the needs of tourists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5343. Cultural Intelligence. 3 Credit Hours.**

This course will focus on the concept of cultural intelligence (CQ), and provide students with both a theoretical background, as well as practical approaches to using this concept within the travel and tourism industry. Students will become knowledgeable in Hofstede's cultural dimensions, the four areas of CQ, as well as strategies for increasing CQ.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5344. Crisis, Risk and Disaster Management. 3 Credit Hours.**

This course will focus on crisis reduction, readiness, response and recovery efforts from both natural and human-induced disasters that affect tourism destinations and businesses. Furthermore, this course will address tourism's potential opportunities for improving systems and procedures.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5345. Understanding Tourism in the 21st Century. 3 Credit Hours.**

This course will explore the conceptual foundations of tourism so that all students in the master's program will have exposure to a common core of tourism content. Specifically, this class will introduce students to topics such as leisure theory, travelers' motivations and decision making, the production of tourism and tourism places, globalization of tourism, social theories of tourist practice and experience, tourism policy, planning and governance, and critical perspectives on tourism.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**THM 5422. Entrepreneurship and Real Estate. 3 Credit Hours.**

The class will focus on real estate issues in hospitality operations, and on the requirements and skills needed to become an entrepreneur in hospitality. As such, the real estate portion will cover general principles of real estate ownership and management, but with a concentration on the unique aspects of hospitality real estate development and financing. Project feasibility analysis and sound underwriting criteria will be a major focus of this section of the course. The entrepreneurship portion of the course will focus on requirements of owning and operating one's own business, including acquisition of capital, capital sources, and preparation of a complete business plan for a new venture.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5485. Graduate Internship. 3 Credit Hours.**

The Graduate Internship utilizes a field placement with emphasis on acquisition and application of practical skills. One hundred and eighty contact hours will take place in an agency, under supervision of both the University internship coordinator and the agency-designated supervisor.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may be repeated for additional credit.

**THM 5601. Service Industry Analytics. 3 Credit Hours.**

This course will examine how organizations in the service industry can use analytics to make better decisions to solve practical industry problems. Analytics involves the use of data and data analysis to make fact-based decisions. This class will address the use of data as a tool for strategic success. It will focus on the collection, preparation, analysis, visualization, management, interpretation, and communication of data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5602. Service Experience Design. 3 Credit Hours.**

This course presents an overview of the process of planning and organizing human, environment, technology and culture components of a service experience in order to improve its quality and the interaction between service provider and customers. Students will learn how to measure and evaluate service experiences using both qualitative and quantitative methods. Furthermore, students will learn how to design service experiences according to consumers' needs as well as the service providers' competencies.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Business & Mngmnt, Fox School, Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5603. Food and Beverage Management. 1.5 Credit Hour.**

This course focuses on contemporary challenges that managers and entrepreneurs in food and beverage businesses face. Key operational and financial success factors that underscore effective foodservice management are emphasized. Topics include restaurant metrics and cost control, menu design, service systems and special event planning. Food trends in restaurants, in addition to the structure of the beverage industry, will be explored including alcohol and food safety regulations. Given an increased consumer emphasis on health, both personally and environmentally as reflected in concern about food sources, nutrition and sustainability issues are also discussed.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5604. Event Logistics and Risk Management. 1.5 Credit Hour.**

This course examines event logistics, crisis and risk management strategies as they apply to the hospitality, festival and event industries. It is designed to look at both theoretical and practical elements of event operations and production to include a comprehensive review of logistics, contracts, technical production elements, staging and risk management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5605. Entrepreneurial Thinking for Hospitality and Event Industries. 1.5 Credit Hour.**

Students will be introduced to the fundamentals of entrepreneurship and how to initiate a new hospitality or event venture. Consideration of the stages of conceptualization, development and operation of a new entity will be emphasized, affording students the opportunity to appreciate the requirements to source funds, make location/ distribution decisions and ultimately, successful and sustainable management of the operation. The focus of the course will be idea generation and business plan development.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Tourism and Hospitality Mgmt.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5606. Hospitality Cost Control. 1.5 Credit Hour.**

Effective management of a hospitality enterprise requires strong cost control acumen to ensure the financial goals of the organization are realized. This course will examine all aspects of cost control within hospitality organizations including food and beverage costs, purchasing, labor cost management, menu pricing, cash flow, theft and loss prevention. Consideration will be given to the importance of effective budgeting and understanding hospitality financial ratios as well as other factors contributing to organizational profitability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5801. Hospitality Asset Lifecycle Optimization. 3 Credit Hours.**

This course is designed to give senior hospitality executives an introduction into managing hospitality assets effectively. With its foundation in macroeconomics, this course will provide insight into the requirements for developing optimal asset life cycles, with consideration being given to ongoing performance systems as well as other long-term consequences, such as the environment and the community in which the asset operates (i.e., corporate social responsibility). Specifically, students will be introduced to commercial real estate and hotel investment as well as gain an appreciation of the asset cycle and the asset management process. Brand selection and managing the relationship with the management company are focuses for hospitality asset managers and, therefore, this course. Finally, students will examine current trends in the hospitality investment and finance markets.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5802. Successful Compliance Strategies for Hospitality Asset Management. 3 Credit Hours.**

This course will provide a comprehensive overview of laws and regulations that focus on the transactional and operational aspects of maintaining hospitality and/or tourist related business. A student in this executive level course will gain knowledge on asset acquisition, asset management and development, and finally, asset divestiture. The course will span the laws that focus on creating and/or joining an existing business, proper legally sound management of that business and factors/methods of divesting the business. Attention will be given to real estate law, merger and acquisitions, divestiture, labor relations laws, equal employment opportunity laws, including Title VII of the Civil Rights Act and the Americans with Disabilities Act, and risk management.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5803. Business Analytics for Executive Decisions in Hospitality. 3 Credit Hours.**

This course aims to provide senior hospitality professionals with the necessary tools to guide executive decisions from analysis of hospitality asset prices and returns. The course is designed to familiarize students with quantitative data management and analytic skills, such as handling of hospitality asset data, econometric modeling, forecasting, interpretation of results, and development of conclusions. Specific emphasis is given to econometric modeling of hospitality asset returns that have cross and/or spatial dependence, in conjunction with applicable urban economics and finance theories. After successful completion of the course, the students are expected to develop significant competencies in the following areas: collection and management of hospitality asset data files; evaluation of historical risk and returns from hospitality assets; construction and optimization of hospitality asset portfolios; spatial econometric modeling; quantitative revenue management/pricing; and, forecasting and statistical inference.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM 5804. Winning Strategies for Hospitality Asset Portfolio Management. 3 Credit Hours.**

This course seeks to develop the critical analytical skills of the senior hospitality executive so that they are able to make effective strategic decisions with respect to the hospitality asset portfolio. Participation in this course will enable students to develop their ability to articulate a strategic vision for managing the asset portfolio, including the effective development and execution of capital plans as well as the evaluation of such capital expenditures. Knowledge is acquired regarding asset portfolio development, specifically mergers and acquisitions, hold versus sell and refinancing decisions.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Sport Tourism Hospitality Mgt.

**Repeatability:** This course may not be repeated for additional credits.

**THM U000. Elective UL. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

## Tyler School of Art (TYLE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**TYLE 8000. Interdisciplinary Seminar. 3 Credit Hours.**

The Graduate Interdisciplinary Seminar is a required course for all first-year MFA students at Tyler. The course is designed to look at events and phenomena that have shaped culture across all disciplines in order to encourage discourse, recognize shared affinities with the understanding that a studio practice occurs within a large cultural context.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may be repeated for additional credit.

**TYLE 8001. Graduate Professional Practices. 3 Credit Hours.**

This course provides MFA students with insight into professional studio practices and the transition to post-MFA endeavors. It may include preparation and submission of materials for the MFA thesis exhibition, developing and refining an artist's statement, and other strategies that students can use to present their work and ideas to external audiences.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Degree Restrictions:** Must be enrolled in one of the following Degrees: Master of Fine Arts.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**TYLE 8149. Japanese Art, Theory, and Design Workshop. 3 Credit Hours.**

The Tyler Summer Art Workshop is rigorous and professional ten-week program that integrates theory and application through an intensive series of guest lectures, research trips, critiques, and studio. In addition, students will have an opportunity to work on a collaborative art project with the guest artist faculty. This interdisciplinary workshop consists of students studying drawing, painting, printmaking and photography. The opportunity to engage in discussions and critiques with students from different art disciplines opens up a whole wide range of topics in art. As a production tool, the Tyler Summer Interdisciplinary Art Workshop offers students the opportunity to explore new technical methods while refining their area of expertise. Students are expected to complete a cohesive of work or one large-scale project by the end of the workshop. This work should not only demonstrate a command of one's craft but in some manner incorporate the overall cultural experience as well. As an enriching medium, the workshop offers students ample opportunity to participate in one of the world's most progressive and culturally stimulating city of Tokyo. Students of visual mediums will find Japan an amalgamation of stoic, ancient ways and cutting edge style.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**TYLE 8501. Theories of Visual Representation. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Art Architecture, Tyler School.

**Repeatability:** This course may not be repeated for additional credits.

**TYLE 8985. Teaching in Higher Education. 3 Credit Hours.**

This course enhances knowledge of how people learn and encourages participants to expand and diversify teaching methods. The course requires class discussion of readings and activities, provides individualized feedback on assignments, and opportunities for self-reflection along with reflection from the learning community of colleagues. The course will also address discipline-specific considerations of teaching studio art and design.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

## Urban Bioethics (UBTH)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**UBTH 5001. Urban Bioethics 1 (Professional Students). 3 Credit Hours.**

In a seminar format, this course introduces students to the field of urban bioethics. Topics to be covered include: the history and theoretical foundations of bioethics; the role of values and ethics in health, health care, law, and policy; the role of values and ethics in understanding the social determinants of health and health disparities and inequities. The course features guest lectures from CBUHP faculty fellows. UBTH 5001 is the number of the course for MD, JD or other Professional students. UBTH 5101 is the number of the course for University Graduate Students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5002. Urban Bioethics 2 (Professional Students). 3 Credit Hours.**

In a seminar format, this course introduces students to the field of urban bioethics. Topics to be covered include: health policy, the ethics of research with vulnerable populations, clinical ethics, theories of cultural competency/humility, and critical epidemiology. The course features guest lectures from CBUHP faculty fellows. UBTH 5002 is the course number for Urban Bioethics 2 for MD, JD, and other Professional students. UBTH 5102 is the number of the course for other graduate students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5022. Community Engagement I (Professional Students). 2 Credit Hours.**

This is the first of a two-course series that incorporates a hands-on, community-based approach that takes a holistic look at a community, analyzing both its strengths and challenges. Students will work in multidisciplinary teams and with a faculty advisor and community representative in different neighborhoods within the city of Philadelphia. Students will work in and with the community to learn how to identify the values underlying the community's strengths and challenges, and then use those that value-orientation to: perform a medical urban map, perform a needs assessment, analyze the bioethics dimensions and the social determinants of health and illness in the community, write a pretend grant to study health issues in the community, conduct oral histories with community members, and conduct photojournalism assignments, among other things.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5023. Community Engagement II (Professional Students). 2 Credit Hours.**

This is the second of a two-course series that incorporates a hands-on, community-based approach that takes a holistic look at a community, analyzing both its strengths and challenges. Students will work in multidisciplinary teams and with a faculty advisor and community representative in different neighborhoods within the city of Philadelphia. Students will work in and with the community to learn how to identify the values underlying the community's strengths and challenges, and then use those that value-orientation to: perform a medical urban map, perform a needs assessment, analyze the bioethics dimensions and the social determinants of health and illness in the community, write a pretend grant to study health issues in the community, conduct oral histories with community members, and conduct photojournalism assignments, among other things.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in UBTH 5022.

**UBTH 5031. The Values, Ethics, & Economics of Health Care Delivery in Urban Communities (Professional Students). 2 Credit Hours.**

This course focuses on the values, organization, funding, and logistics of community based health care delivery. Students will be introduced to the various agencies involved in urban health care delivery - FQHC, HRSA, NIH, and others. In addition, an introduction to grant writing in the area of urban bioethics and health delivery in urban communities will be provided.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5041. Critical Social Science and Urban Bioethics (Professional Students). 2 Credit Hours.**

This course introduces students to the theories and methods of critical social science, such as critical medical anthropology (CMA). Students will gain an appreciation for the role and importance of political, religious, economic, and social lenses, and of understanding disease and illness as biocultural phenomena.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5082. Independent Study 1 (Professional Students). 3 Credit Hours.**

Working in conjunction with an advisor, who upon approval can be from the Medical School, the CBUHP, or a dual-degree student's home department, the student will craft and complete an independent study course on a topic/area of interest relevant to professional development. This is the first of two independent studies allowed for MA in Urban Bioethics credit. Please see the MA in Urban Bioethics Handbook for the most recent description of allowable approaches to the independent study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5101. Urban Bioethics 1 (Graduate Students). 3 Credit Hours.**

In a seminar format, this course introduces students to the field of urban bioethics. Topics to be covered include: the history and theoretical foundations of bioethics; the role of values and ethics in health, health care, law, and policy; the role of values and ethics in understanding the social determinants of health and health disparities and inequities. The course features guest lectures from CBUHP faculty fellows. UBTH 5101 is the number of the course for University Graduate Students. UBTH 5001 is the number of the course for MD, JD or other Professional students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5102. Urban Bioethics 2 (Graduate Students). 3 Credit Hours.**

In a seminar format, this course introduces students to the field of urban bioethics. Topics to be covered include: health policy, the ethics of research with vulnerable populations, clinical ethics, theories of cultural competency/humility, and critical epidemiology. The course features guest lectures from CBUHP faculty fellows. UBTH 5102 is the course number for Urban Bioethics 2 for Temple Graduate students. UBTH 5002 is the number of the course for MD, JD, and other Professional students.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5122. Community Engagement I (Graduate Students). 2 Credit Hours.**

This is the first of a two-course series that incorporates a hands-on, community-based approach that takes a holistic look at a community, analyzing both its strengths and challenges. Students will work in multidisciplinary teams and with a faculty advisor and community representative in different neighborhoods within the city of Philadelphia. Students will work in and with the community to learn how to identify the values underlying the community's strengths and challenges, and then use those that value-orientation to: perform a medical urban map, perform a needs assessment, analyze the bioethics dimensions and the social determinants of health and illness in the community, write a pretend grant to study health issues in the community, conduct oral histories with community members, and conduct photojournalism assignments, among other things.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5123. Community Engagement II (Graduate Students). 2 Credit Hours.**

This is the second of a two-course series that incorporates a hands-on, community-based approach that takes a holistic look at a community, analyzing both its strengths and challenges. Students will work in multidisciplinary teams and with a faculty advisor and community representative in different neighborhoods within the city of Philadelphia. Students will work in and with the community to learn how to identify the values underlying the community's strengths and challenges, and then use those that value-orientation to: perform a medical urban map, perform a needs assessment, analyze the bioethics dimensions and the social determinants of health and illness in the community, write a pretend grant to study health issues in the community, conduct oral histories with community members, and conduct photojournalism assignments, among other things.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in UBTH 5122.

**UBTH 5131. The Values, Ethics, & Economics of Health Care Delivery in Urban Communities (Graduate Students). 2 Credit Hours.**

This course focuses on the values, organization, funding, and logistics of community based health care delivery. Students will be introduced to the various agencies involved in urban health care deliver - FQHC, HRSA, NIH, and others. In addition, an introduction to grant writing in the area of urban bioethics and health delivery in urban communities will be provided.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5141. Critical Social Science and Urban Bioethics (Graduate Students). 2 Credit Hours.**

This course introduces students to the theories and methods of critical social science, such as critical medical anthropology (CMA). Students will gain an appreciation for the role and importance of political, religious, economic, and social lenses, and of understanding disease and illness as biocultural phenomena.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5182. Independent Study 1 (Graduate Students). 3 Credit Hours.**

Working in conjunction with an advisor, who upon approval can be from the Medical School, the CBUHP, or a dual-degree student's home department, the student will craft and complete an independent study course on a topic/area of interest that is relevant to professional development. This is the first of two independent studies allowed for MA in Urban Bioethics credit. Please see the MA in Urban Bioethics Handbook for the most recent description of allowable approaches to the independent study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**UBTH 5189. Urban Bioethics Field Study 1. 1 to 6 Credit Hour.**

The student will identify a specific urban problem evident in North Philadelphia and collaborate with academic, medical, and community mentors to develop and begin implementation of an innovative intervention with the goal of improving health in a fiscally sustainable way.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**UBTH 5210. Special Topics: Social Science Approaches to Urban Bioethics. 1 to 3 Credit Hour.**

This course features a rotating set of topics related to the intersections of the social sciences and urban bioethics. Offerings are not part of the regular course listings. Examples include 'cultural competency and humility'; 'health, illness, and the urban body', and 'public images of urban health and illness'. Please contact the listed Center for Bioethics, Urban Health, and Policy faculty member for more details on the current offering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**UBTH 5220. Special Topics: Urban Bioethics at the Bedside. 1 to 3 Credit Hour.**

This course features a rotating set of topics related to the clinical urban bioethics. Offerings are not part of the regular course listings. Examples include 'general clinical ethics in the urban environment', 'navigating clinical disagreements', and 'pediatric urban bioethics'. Please contact the listed Center for Bioethics, Urban Health, and Policy faculty member for more details on the current offering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**UBTH 5230. Special Topics: Current Topics in Urban Bioethics. 1 to 3 Credit Hour.**

This course features a rotating set of topics related to current events in urban bioethics. Offerings are not part of the regular course listings. Examples include bioethics and political discourse; navigating the Ebola fear response; and public policies affecting violence and health. Please contact the listed Center for Bioethics, Urban Health, and Policy faculty member for more details on the current offering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**UBTH 5240. Special Topics: Research and Urban Bioethics. 1 to 3 Credit Hour.**

This course features a rotating set of topics related to urban bioethics and research. Offerings are not part of the regular course listings. Examples include the social determinants of health in urban research and establishing and maintaining trust of community partners. Please contact the listed Center for Bioethics, Urban Health, and Policy faculty member for more details on the current offering.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**UBTH 9082. Independent Study 2 (Professional Students). 3 Credit Hours.**

Working in conjunction with an advisor, who upon approval can be from the Medical School, the CBUHP, or a dual-degree student's home department, the student will craft and complete an independent study course on a topic/area of interest relevant to professional development. This is the second of two independent studies allowed for MA in Urban Bioethics credit. Please see the MA in Urban Bioethics Handbook for the most recent description of allowable approaches to the independent study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in UBTH 5082.

**UBTH 9182. Independent Study 2 (Graduate Students). 3 Credit Hours.**

Working in conjunction with an advisor, who upon approval can be from the Medical School, the CBUHP, or a dual-degree student's home department, the student will craft and complete an independent study course on a topic/area of interest that is relevant to professional development. This is the second of two independent studies allowed for MA in Urban Bioethics credit. Please see the MA in Urban Bioethics Handbook for the most recent description of allowable approaches to the independent study.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:** Minimum grade of B- in UBTH 5182.

**UBTH 9189. Urban Bioethics Field Study 2. 1 to 6 Credit Hour.**

This course continues its companion course, UBTH 5189: Urban Bioethics Field Study 1. The student, having identified a specific urban problem evident in North Philadelphia, and having developed and initiated the intervention, will continue to work with academic, medical, and community mentors to evaluate the intervention. This course also charges the student with laying the groundwork for future sustainability.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:** Minimum grade of B- in UBTH 5189.

**UBTH 9995. MA in Urban Bioethics Thesis (Professional Students). 3 Credit Hours.**

Working in conjunction with a thesis advisor, who upon approval can be from the Medical School, the CBUH&P, or a dual-degree student's home department, the student will conduct an original research project (empirical or non-empirical) and produce a publishable quality paper. The thesis should be a novel contribution to the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Law, Medicine.

**Repeatability:** This course may be repeated for additional credit.

**UBTH 9996. MA in Urban Bioethics Thesis (Graduate Students). 1 to 6 Credit Hour.**

Working in conjunction with a thesis advisor, who upon approval can be from the Lewis Katz School of Medicine, the CBUH&P, or a dual-degree student's home department, the student will conduct an original research project (empirical or non-empirical) and produce a publishable quality paper. The thesis should be a novel contribution to the field.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate, Law Graduate.

**Repeatability:** This course may be repeated for additional credit.

## Urban Education (URBE)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**URBE 5401. Policy and Practice in Urban Education. 3 Credit Hours.**

This course introduces students to key issues in urban education. It helps students situate urban schools in their broader social, political, and economic contexts, providing a deeper understanding of the ways larger social processes shape cities and their schools. In addition, it provides students with multiple lenses to understand dynamics within urban schools and classrooms.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**URBE 5417. The Urban Environment. 3 Credit Hours.**

"The Urban Environment" will provide students with an introduction to the historical, social, and political factors shaping cities. The course is primarily, but not exclusively, intended for education students and is designed to help students to develop a more sophisticated understanding of the contexts in which urban education occurs. More specifically, the course will focus on the history of cities, including 20th and 21st century urban transformation, the development and persistence of residential segregation, urban politics and poverty, and trends in theory and practice around urban redevelopment. Students will, of course, be encouraged to make connections between course material and other issues in urban education or their own areas of specialization.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Course Attributes:** SI

**Repeatability:** This course may not be repeated for additional credits.

**URBE 5501. Urban Schools. 3 Credit Hours.**

This course is designed to help students understand the social, political, and economic factors that shape urban schools. The focus is on both perennial and emerging issues affecting the urban environment and schools and on major policies relating to those issues (e.g., equity, accountability, and school finance). The class requires several critiques of educational literature, as well as an extensive review of the literature on a substantive topic related to urban education. Offered every Fall term.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**URBE 5515. Service Learning and Community Development. 3 Credit Hours.**

This course presents models for service learning with particular emphasis on those that contribute to urban community development and community building. Students conduct a participatory community study and design a service learning project that meets authentic community needs. Offered every Fall term.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.



**URBE 5516. School-Community Partnerships in Urban Settings. 3 Credit Hours.**

This course introduces models, practices, and theories for developing partnerships between schools, universities, community-based groups/agencies, and neighborhoods. Among the models studied are various types of partnerships, community organizations, family centers, and community schools.

The course emphasizes the manifold issues that emerge when partnerships involve participants who cross the boundaries of class, race, gender, professions, culture, and language. Field visits and fieldwork are included. Offered Spring term.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**URBE 5565. The Origins of Urban Education. 3 Credit Hours.**

This reading and discussion class is based on the most important secondary literature in urban history and the history of urban education. Philadelphia is used as a case study. Topics in urban history include the geography and functional differentiation of urban space; the political economy of cities; urban demographics with a special emphasis on racial and ethnic minorities; urban political and social institutions; and the site as educator, including regional and site planning and urban material culture. Topics in urban educational history include race and ethnicity in the history of urban education; the politics of urban education; the history of social class; and the opportunity structure in urban education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**URBE 5611. Reforming City Schools. 3 Credit Hours.**

This course will examine educational policy reform ideas and strategies. The course content will focus on understanding the impact of educational policymaking on big city school districts and their local school contexts. Special attention will be paid to the urban social and political environments in which policies are made and applied, along with the challenges of racial and social class inequalities. Students will consider different types of current and past reforms, utilizing published research literature, popular media, and Internet-based resources to increase the likelihood that current debates in the field are covered. The intended and unintended consequences of educational and social policy will be examined as well.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**URBE 5620. Special Topics in Urban Education. 2 to 6 Credit Hours.**

Topics vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**URBE 5630. Special Seminar in Urban Education. 3 Credit Hours.**

Topics vary.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**URBE 8602. Theory Seminar in Urban Schools. 3 Credit Hours.**

This course introduces some important theoretical frameworks and theorists that inform research in urban education. Emphasis is on the contributions of the social sciences. Theories are discussed in the context of urban education and are applied to major issues of interest to the class. Each student selects an issue, which s/he may have begun to explore in URBAN ED 5501, around which written and oral presentations are based. Teams of students also lead class discussions on the work of selected theorists.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**URBE 8603. Urban Education Doctoral Capstone. 3 Credit Hours.**

This is the first semester of a two semester (Fall/Spring) course that is required for all urban Education doctoral students. It is designed to support students as they carry out their own independent research projects and to serve as a capstone to their doctoral education. Ideally, all students will work on developing projects related to their future dissertation research.

**Field of Study Restrictions:** Must be enrolled in one of the following Fields of study: Urban Education.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Education & Human Development.

**Repeatability:** This course may be repeated for additional credit.

**URBE 9982. Independent Research in Urban Education. 3 Credit Hours.**

Because the Urban Education Program is interdisciplinary and draws on faculty from across the University, it is critical that students become acquainted with faculty whose research styles and interests will contribute to their course of study by, for example, serving on their dissertation committees. This course requires students to design and complete a project with a faculty member outside the program. In consultation with their advisors, students identify an affiliated member with whom to work and then create and complete an independent study. This research can take several forms, e.g., collecting and analyzing data, conducting an extensive literature review, or utilizing secondary data.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**URBE 9991. Research Practicum. 3 Credit Hours.**

This doctoral-level course provides each student with the experience of completing an independent study research project. Students are required to formulate a research question; conduct a thorough review of the relevant literature on the topic; design a small study to be carried out throughout the year; and write up the results. While this project may be directly related to the student's dissertation research, it does not serve as a replacement of that research endeavor. Each student is expected to present her/his work in a public setting.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**URBE 9996. Masters Thesis. 3 Credit Hours.**

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may be repeated for additional credit.

**URBE 9999. Doctoral Dissertation. 1 to 6 Credit Hour.**

Open only to doctoral candidates who have successfully completed the minimum hours of coursework required for the degree, passed the preliminary examination, and have an approved proposal on file with the Graduate School. Continuous registration during the Fall and Spring semesters is required until the dissertation is completed and accepted by the Graduate School.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Student Attribute Restrictions:** Must be enrolled in one of the following Student Attributes: Dissertation Writing Student.

**Repeatability:** This course may be repeated for additional credit.

## Urology (UROL)

Course information contained within the Bulletin is accurate at the time of publication in August 2023 but is subject to change. For the most up-to-date course information, please refer to the Course Catalog.

**UROL M290. Intro Clinical Urology. 0 Credit Hours.**

**Course Attributes:** M5

**Repeatability:** This course may not be repeated for additional credits.

**UROL M391. Career Exploration of Urology. 0 Credit Hours.**

This elective will allow students to gain exposure to the specialty and the types of health conditions experienced by patients seen by providers in this specialty as healthcare team members.

**Repeatability:** This course may be repeated for additional credit.

**UROL M790. Urology. 0 Credit Hours.**

**Course Attributes:** M2

**UROL M890. Urology Sub-I. 0 Credit Hours.**

Urology Sub-I satisfies the sub-I requirement for 4th year. Students will participate on the Urology service, in both the inpatient and outpatient setting. They will take on the role of an intern, including seeing consults, following patients, seeing patients in clinic and participating in OR cases. They will develop assessment and plans for the patients they are seeing.

**Repeatability:** This course may be repeated for additional credit.

# Faculty

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## Beasley School of Law

*Alice G. Abreu*, The Honorable Nelson A. Diaz Professor of Law, Department of Law; JD, Cornell Law School.

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Graduate Certificate: Gender, Sexuality and Women's Studies .....	427	Graduate Certificate: Public Relations .....	451
Graduate Certificate: Generic Drugs .....	762	Graduate Certificate: Real Estate .....	159
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Media and Communication PhD .....	443	Music Performance/Harp MM .....	545
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Pharmaceutical Sciences/Medicinal Chemistry PhD .....	741	Post-Master's Certificate: Generic Drugs .....	776
Pharmaceutical Sciences/Pharmaceutics MS .....	737	Post-Master's Certificate: Global Pharmacovigilance/Benefit-Risk Management .....	777
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Pharmaceutical Sciences/Pharmacodynamics PhD .....	746	Post-Master's Certificate: Pharmaceutical Manufacturing: Process Development and Analysis .....	780
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